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ABSTRACT

The document, over half of which consists of appendixes, reports on a study of the state of the art in the development of individualized education programs (IEPs) in Connecticut. Specific areas examined included the existence of a diagnostic/instructional link, assessment procedures across handicapping conditions, the development of objectives across handicapping conditions, and the evidence of information necessary to the formulation of an IEP (e.g., date of review, evidence of procedural due process, etc.). The findings indicated serious problems, such as the fact that a significant number of cases investigated had missing data specific to the IEP requirements of the Education for All Handicapped Children Act (P.L. 94-142). Furthermore, the idea that a relationship would exist between the results of the psychoeducational assessments and the goals and objectives of the IEP was not substantiated. There was apparent confusion among professionals regarding the mechanics of developing the IEP and what required data must be included, and an inability of the IEPs examined to account for a child's "all day" needs. Results indicated a need for inservice training in several areas. Appendixes include survey forms, educational objectives across handicapping conditions by test grade equivalents, and assessed weaknesses. (DLS)

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IEPs: THE STATE OF THE ART IN CONNECTICUT

Susan J. Schenck, Ph.D.

William K. Levy

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INTRODUCTION

In recent years, federal legislation (Public Law 93-380, Section 504 of the Rehabilitation Act of 1973, and Public Law 94-142) has provided special education professionals with a legal basis for providing all handicapped children with a free and appropriate education. The most recent of these laws, The Education for All Handicapped Children Act of 1975 (P.L. 94-142), stipulates that each state and local educational agency must provide every child receiving special education with an Individualized Educational Program (IEP). The particular substance of this mandate, to meet the unique needs of the individual, rests on the condition that each school system is required to develop a plan, which being special, actually benefits the child (Owens, 1975).

A close examination of P.L. 94-142 reveals, however, that while it is directed that each child receiving special education must be provided with an IEP, there is no direction regarding the methodologies for the development of the IEP. Recognition of this fact has been demonstrated by the Council for Exceptional Children's (CEC) Institute and Conference on Individualized Educational Program Planning (Albuquerque, New Mexico, January, 1978) which hosted numerous sessions, each purporting a different methodology for IEP development. The official stance taken by CEC designates the IEP as a management tool, not as an instructional device. The primary focus of the IEP revolves around the overall management of the instructional setting.

While diagnostic terms may implicate a particular management technique, the specific learning needs of an individual are not inherently apparent in a label. Mere placement within a special education setting, that is, the management of the learner, does not automatically lend itself to meeting the unique needs of the learner. To assume that children with the same diagnostic label require the same type of instruction is to deny the importance of uniqueness among all individuals. Indeed, special education is defined as "... the provision of specially designed instruction ..." [P.L. 94-142, Section 4(a)(19)]. *Specially designed instruction* is that educational programming which has its base in the identified learning and behavioral needs of the student. Assessment practices are the means by which the unique learning needs of the child are identified. With the knowledge of these assessed needs, *specially designed instruction* or instructional alternatives can be formulated.

The recent trend toward placement in the least restrictive alternative further accentuates the need for provision of instructional alternatives. For instance, the child who exhibits a reading problem within the resource room does not leave the problem within the confines of that room. The reading deficit is carried into all subject areas. Thus, all teachers involved with the child must be provided with alternative instructional methods and materials by which the unique learning needs of the learner can best be met.

The question that must be addressed concerns the nature of the IEP. Cawley (1977) has pointed out that it is through instruction, the act of teaching, not management, that the unique learning needs of the child are met. On the other hand, if the IEP is to be utilized solely as a management device, as advocated by CEC, and *specially designed instruction* is not a component, how and where are the unique educational needs of the learner met?

The express purpose of the IEP, to deal effectively with individual differences, is to be accomplished through the development and implementation of an educational program that takes into account the child's strengths and weaknesses. Diagnostic procedures provide the means of identifying this information. In order to develop an IEP that truly represents the unique needs of the child, it is important to have appropriate assessment data which indicates not only strengths and weaknesses, but also the current levels of performance (Hayes, 1977). P.L. 94-142, Section 602, stipulates that the following components be incorporated within the IEP:

1. A statement of the child's present levels of educational performance;

2. A statement of annual goals, including short term instructional objectives;

3. A statement of the specific education and related services to be provided to the child,

and the extent to which the child will be able to participate in regular educational programs;

4. The projected dates for initiation of services and the anticipated duration of the services; and

5. Appropriate objective criteria and evaluation procedures and schedules for determining, on at least an annual basis, whether the short term instructional objectives are being achieved.

An educational program, individualized to the extent that it incorporates child data, must be related to the psychoeducational assessment which contains such information. The current emphasis on the need to synthesize the diagnostic information into the educational program leads one to question the current status of IEP development since, by law, Individualized Educational Programs should already be accomplishing this end.

This investigation was undertaken to answer the question, "What is the State of the Art in the development of Individualized Educational Programs within the State of Connecticut?" The focus of this investigation was to determine the degree to which Connecticut has advanced in the IEP developmental process. Specific areas examined were the following: (1) the existence of a diagnostic/instructional link, (2) assessment procedures across handicapping conditions, (3) the development of objectives across handicapping conditions, and (4) the evidence of information necessary to the formulation of an IEP (e.g., date of review, evidence of procedural due process, etc.).

Many articles and investigations in recent months have been written concerning IEP development. For the most part, these documents have dealt with interpretations or restatements of IEP requirements and/or attempts to determine the quality of current educational programs. In this investigation a conscious effort was made to avoid qualitative judgments of IEPs developed in Connecticut, because in the authors' opinion, it is premature to assess the quality of IEPs before examining the developmental process. Furthermore, it is our belief that knowledge gained from evaluating how IEPs are developed will not only point out ways in which the developmental process can be improved, but also lead to upgrading the quality of IEPs.

The Local Educational Agencies (LEAs) participating in this investigation have demonstrated the desire to improve their skills relative to IEP development. This investigation is meant to serve these individuals who are actively engaged in the education of handicapped children.

RELATED LITERATURE

Individualization

Many leading educators during the late 1800's and early 1900's made reference to the importance of individualized instruction. Charles W. Eliot (1842), President of Harvard, recognized that each individual was a unique personality. He recommended that uniform programs and methods of instruction where applied simultaneously to large numbers of children be abolished. Hall (1904) advocated the development of educational programs that recognized the individual differences in children. William R. Harper (1903), President of the University of Chicago, pinpointed the need for individualization in his statement:

> The belief more and more generally accepted is that the work of the school must be adopted to the needs and possibilities of the individual pupil rather than the pupils should be treated in mass.

The major educational trend in the 1920's, according to Caldwell and Courtis (1924), was in the general direction of individualization. Dewey's concern with the child's variable needs was reflected in his statement that each child is "equally an individual and entitled to his capacities, be they large or small in range ... each has needs of his own, as significant to him as those of others are to them" (cited in Abernathy, 1959, p. 254). In 1926, the adaptation of school programs to account for individual differences was advanced by Weber. He postulated that individual differences in ability and interest can be established prior to teaching through observation. Such observation, as suggested by Remy (1926), could lead to an adaptation of the instruction to meet the child's unique needs. Following the same train of thought, Abramson (1927), advanced the notion that instruction for intact learners be adapted for learners of varying intellectual abilities. Belief that not all children can learn at the same rate while using the same method of instruction was the basis of Zaluzhni's (1928) conclusion that instruction should be adapted to account for individual needs.

The early literature clearly delineates a need to adapt instruction to meet the unique learning needs of the child. For the purposes of this investigation, however, the question that remains to be examined regards the current status of individualized instruction for handicapped children within the existing educational structure. One would tend to assume that given the early thrust toward individualization, special education would have established a delivery system to accommodate the unique learning needs of the exceptional student. yet, recent literature still resounds with the call to establish an educational system that is totally responsive to the needs of the individual child.

The most salient characteristics inherent in support of individualized instruction — diagnosis, intervention, and evaluation — are the components proposed by Cronbach (1967), Edling (1971), Schwartz (1967), and others of today. Echoing Dewey, Magnifico (1959) concluded that children must be afforded an opportunity to an education commensurate with their individual needs and abilities. Johnson (1964, p. 70) has written that:

> If special education ... is ever to achieve the goal of being clinical education for children who have learning problems, it is essential that special education ... select the learning activities (skills, content, and attitudes) that will aid the individual in learning.

Parisi (1966) argued that the efficacy of teaching had not taken into account the individual differences that exist among students as earlier investigators had advocated.

Terman (cited in Seagoe, 1972), Soloway (1972), and Rogow and David (1974), have suggested that schools need to provide for the special needs student in a more adequate manner. They advocated integration of the special needs student into the regular educational system insofar as possible. Furthermore, they suggested that these students should associate with other children with similar needs, and that such students not be labeled as atypical, but that the educational system provide for them in terms of their particular needs.

A long held goal of special educators, individualized education had not been mandated prior to the passage of P.L. 94-142. The requirement within this law that each child receiving special education have an IEP designed to meet his unique needs, has been the subject of various articles (Cartwright et al., 1973; Eisele, 1971; Gallagher, 1974; Hammill, 1971; Herrick, 1972; Johnson, 1967; Minskoff, 1973; Reger et al., 1968; Rogow and David, 1974; and Ysseldyke, 1973).

Specific guidelines for meeting the unique learning needs of the individual have been suggested by Bouchard and Nelson (1971). These guidelines for providing an instructional system for optimum individualization include the:

(1) Use and development of specific behavioral objectives for each child which are based on the student's present level of attainment, his rate of learning, and his potential growth.

(2) Identification and use of those teacher-pupil methods of instruction that are most effective for each pupil.

(3) Identification and use of motivational procedures that are most effective for each pupil.

(4) Identification and use of instructional equipment and materials that are most effective for each pupil.

Dunn, Goldstein, and Ysseldyke (cited in Gallagher, 1972) have also outlined various methods for meeting the unique learning needs of the child. These methods are summarized as follows:

(1) All handicapped students should not be labeled as permanently handicapped, but that in some cases their conditions can be eliminated or improved by proper educational programming.

(2) There is a strong trend in the adoption of prescriptive teaching. This includes a clear statement of instructional objectives and the means by which they will be reached.

(3) Programs in special education should start as early in the life of a child as possible.

(4) In recent years, specially designed materials and techniques for the exceptional child have become increasingly available to the teacher.

Learning Style

A reoccurring theme in the literature, relative to the individualization of instruction, centers on learning style. Recently gaining in popularity, varied definitions of learning style have emerged.

Taba, Levine, and Elzey (1964) represent the viewpoint of researchers who view learning style in terms of cognitive information processing patterns. They describe learning style as:

> ... the mode of thought which an individual employs rather persistently in a variety of different tasks, such as: selecting a basis for grouping objects, determining how to label what he sees and how to organize the various aspects of his environment (p. 8).

Other identified factors related to learning style are: (1) patterns of behavior evidenced by students, (2) students' preferred modality, and (3) instructional variables involving teaching techniques and classroom structure. Relative to the first of these categories, Rosenberg (1968) and Oen (1973) provide us with definitions. Rosenberg states that "... learning style refers to an individual's characteristic pattern of behavior when confronted with a problem ..." (1968, p. 22). Oen has suggested that learning style is determined by "consistent patterns of behavior or activity preferred and employed by the individuals to effectively and efficiently acquire knowledge, skills and attitudes" (1973, p. 16).

With regard to the second category, Dunn and Dunn (1972) have viewed learning style as a function of the student's preferred sensory modality. They have delineated four modalities that require assessment: visual, auditory, tactile, and kinesthetic. In the evaluation of learning style, Dunn and Dunn point to the need for consideration of other variables such as the student's preferred time of day, required amount of mobility, and level of personal responsibility.

The last of the three categories, instructional variables, has been addressed by Hunt (1975). He defines learning style in terms of the amount of structure needed by a student in order to maximize learning. Specifically, Hunt addresses the concept of conceptual level (CL). A student with a low CL would require high structure while a high CL learner works best in a low structure situation. Research by McLachlan (1973), Tomlinson and Hunt (1971), and Tuckerman (1968) is supportive of this premise.

Knowledge of an individual's learning style becomes of paramount importance when dealing with the exceptional child. Hunt (1971) found that although ability and learning style are correlated, they are separate entities. When designing instructional programming for the special needs student, this difference demands attention because of the tendency of teachers to categorize students in terms of their ability. Special needs children require recognition and application of their particular learning style. Teachers must be presented with a non-content oriented, non-judgmental method through which they can assist the learner to achieve (Calder, 1977). A curriculum that is sensitive to an individual's learning style and flexible enough to allow substitution in the instructional technique is essential to the learner with special needs and to the teacher charged with meeting these needs.

Behavioral Objectives

A popular theme in the current literature relates to the writing of behavioral objectives, statements which communicate in behavioral terms where a learner should be as a result of a specific learning experience.

The behavioral objective should contain several elements: (1) the behavior of the learner, (2) the terminal behavior, and (3) the criteria for acceptable performance. Objectives should be specific. They should reflect the learning that is to take place within a specific subject area (e.g., social studies) or in a skill area (e.g., mathematics). Magar (1962) maintains that without objectives it is impossible to evaluate a course or program, and there is no sound basis for selecting appropriate content or instructional materials.

When dealing with special needs learners, the basic underlying concept of behavioral objectives is useful. Appropriate instructional practices designed to meet unique educational requirements should attend to the learning and behavioral needs of the student. As such, the emphasis should be upon objectives which are designed to meet the learning needs of the student regardless of the subject matter or basic skills being presented. Cawley analyzed prepared lists of objectives and literature relative to objectives. He concluded that the behavior of the learner is not given adequate consideration in the writing of behavioral objectives, but rather that the greatest focus is on the discipline or skill involved. For example, in a social studies objective, the emphasis would be on the social studies content rather than on the behavior exhibited by the learner.

According to Cawley (1974), behavioral objectives used with handicapped children should:

1. contain statements specific to the behaviors of the instructor and the learner;

2. be used as accountability confirmation (e.g., if an instructor has certified that a learner can perform the requirements of an objective, another instructor should expect competence in that area at that level);

3. be used in a variety of subject matter disciplines;

4. have common utility across varying cultural and experiential backgrounds;

5. be used at different developmental levels;

6. be linked to the diagnostic data obtained during the psychoeducational assessment, and

7. serve as guidelines for the use of instructional media and instructor made materials.

Sabatino (1973) has argued that there is no difference across diagnostic labels relative to objectives. This implies that the instructional procedures would not differ across handicapping conditions. He goes on to state that classroom programming can be undertaken with increased precision when the information processing behaviors are known for all children who are experiencing learning problems.

Diagnostic/Instructional Link

Educational diagnosis and assessment are closely related to instruction. Coulter and Morrow (1977) indicate that the two major purposes of psychoeducational assessment are: (1) data collection for differential diagnosis leading to placement in a special education program (identification/placement), and (2) data collection for determining an individual's strengths and weaknesses relative to the development of an instructional program (intervention/programming). In addition they point out that it is not possible to achieve both purposes of assessment through the use of one standard test battery. Furthermore, they state that the two aforementioned purposes and the subsequent need for differential test selection are not apparent in current psychoeducational assessment practices in public schools. Oakland and Matuszek (cited in Coulter and Morrow, 1978) and Bernal (1975, 1976) have also described the purposes of assessment as incorporating (a) classification and (b) intervention planning.

The historical purposes of intervention programming originated from a demand by teachers for more relevant information from psychoeducational assessment results that would be useful in planning classroom instruction (Coulter and Morrow, 1977). To fulfill this intent, different types of data need to be collected. Weisgerber (1975) has postulated that data which is necessary for the development of instruction should be responsive to learner needs. This information should include descriptive data, diagnostic data, educational needs, social needs, and personal concerns.

Much has been written about the relationship between diagnostic data and the instructional techniques employed. As early as 1958, Haeussermann stated that "... the purpose of educational evaluation is to provide a basis for planning and educational programming." Schiefelbusch (1967) maintains that educational planning must be based upon relevant descriptive information which provides the basis for the planning of process steps in the education and treatment of the individual. Suggesting that we employ a diagnostic system which grows directly from the same set of theories as does the treatment, Eysenck (1960) views such a diagnostic system as being intimately linked with the method of treatment chosen. Tuckerman (1976), Mercer and Ysseldyke (1976), Filler et al. (1975), and Faur (1974) hold that tests shoud furnish information relevant for practical application in the classroom. Testing which leads only to classification and not to specific programming has been heavily criticized by Mercer (1972), Bernal (1975), Jackson (1975), and Rains et al. (cited in Coulter and Morrow, 1978). With the utilization of assessment data as a major component in the development of intervention, the goals and objectives of the IEP should incorporate the "all day" needs of the learner as advocated by Cawley (1977). He views assessment as a means of attaining data and information about the child which is useful in planning intervention strategies. As is evidenced in the aforementioned literature, the results of assessment procedures are to be utilized in the development of an educational program that is tailored to meet the unique needs of the learner.

Regardless of the instrument used, the goal of assessment remains constant, that is, the determination of cognitive, personality, or aptitude strengths and weaknesses. There is substantial variability, however, in the tactics employed to achieve these goals (Webster and Schenck, 1978).

Cawley (1977) has pointed out that the strategy underlying the development of the intelligence tests by Simon and Binet was to interweave sets of tasks appropriate at one age level with sets of tasks which were qualitatively

different at another mental age (MA) level. This strategy allowed examination of both qualitatively and quantitative cognitive differences among children at the same and different developmental levels. The purpose underlying the development of the Wechsler scales is similar to that of the Binet in that it attempts to differentiate among children by intellectual ability. Where Binet and Simon attempted to differentiate among MA levels by tasks as well as content for these tasks, Wechsler used the same tasks or behaviors across all age levels while merely modifying the content (Webster and Schenck, 1978). The implications of this strategy are profound because it intimates that the differences among children of different ages are related to the amount of information assimilated rather than to the maturation of mental functions. As such, the cognitive developmental phenomena associated with maturation are ignored. The same criticisms are directed toward the WISC-R, ITPA, Detroit Test of Learning Aptitude, and other norm-referenced multiple subtest instruments. These tests differentiate among children on the basis of quantitative performance rather than on the basis of qualitative performance in conjunction with the amount of knowledge possessed by the child. Webster and Schenck (1977, 1978) have proposed the utilization of an alternative approach to assessment which involves a conceptual framework differentiating among behaviors or the psychological processes involved in written or spoken language, content, and information processing variables.

Research demonstrates the shortcomings of many widely used standardized diagnostic instruments (Anastasi, 1938; Belmont and Birch, 1969; Critchley, 1970; Keogh et al., 1972; Koppitz, 1975; Newcomer and Hamill, 1976). It seems obvious that modifications are needed in the manner in which diagnostic assessments are being conducted. Ysseldyke and Salvia (1974) have written that the controversy over educational diagnostic centers upon two models — the task analysis approach and the ability-training approach.

Task Analysis is predicated upon the principle (Gagne', 1964) that any human task can be analyzed with relatively distinct component behaviors which are mediational, instructional links that are prerequisite to the mastery of the task (Smith and Pucel, 1970). Indicating that task analysis is an effective instructional method for teaching skills to handicapped individuals, Minge and Ball (1967) assume that task analysis involves the selection of a target task and the subsequent analysis of it into its component behaviors. The task analysis model, which counts among its advocates Bijou (1970), Gold (1968), Mann (1970, 1971a, 1971b) and Resnick, Wang, and Kaplan (1973), advances the notion that each complex goal can be analyzed into specific skills. As Ysseldyke and Salvia (1978) point out, when children fail academically, there is no effort under the task analysis model to identify weaknesses in cognitive, perceptual, or psycholinguistic abilities.

However, task analysis is a logical and systematic approach to the development of behavioral objectives, although it does have its limitations as pointed out by Cawley (1974) and Lerner (1971). Among other problems it is a relatively time consuming procedure and there is some question as to whether two independent analyses of the same task would be identical in terms of instructional objectives, content, and organization of content. A potentially powerful process, task analysis should not become so cumbersome that "its complexity masks its utility" (Cawley, 1974).

The *ability training approach,* advocated by certain investigators (Bannatyne, 1968, 1969; Bateman, 1967a, 1967b; Frostig, 1967, Johnson and Myklebust, 1967; Kirk, McCarthy, and Kirk, 1968; and McCarthy, 1972), has as its primary purpose the diagnosis of the ability or process and strengths and weaknesses in order to prescribe interventions designed to remediate ability weaknesses (Ysseldyke and Salvia, 1978). Assessment practices in the ability training model not only observe interindividual and intraindividual differences, but also attempt to identify the processes or abilities that cause the observed differences. The proponents of the ability training approach go an additional step beyond the task analysis advocates in relating the method to instruction. They maintain that certain adequately developed abilities are necessary prerequisites to the attainment of academic skills.

Incorporation of either approach into the developmental phase of the IEP requires extreme caution to assure that the process of the model(s) does not interfere with the primary purpose of the IEP, that is, the development of a program that meets the individual needs of the child.

Regardless of the approach taken, it is essential that assessment procedures result in the procurement of data that can be transmitted to all the teachers in both regular and special education who work with the child during

the school day. The literature reveals a need to establish a diagnostic/instructional link so that the "all day" needs of the child are met. It is within the IEP that such needs can potentially be addressed.

The link between the psychoeducational assessment and the long-term goals and short-term instructional objectives has also been the subject of recent examinations. Safer et al. (1977) have related the development of an appropriate educational program for a child based upon his strengths and weaknesses to the diagnostic/prescriptive approach to teaching. Diagnostic/prescriptive teaching is the assessment of educational needs and the determination and implementation of a program based upon those needs. Hayes (1977, p. 15) has stated that:

> ... since each program is written for a particular child, it is important to have appropriate assessment data available that indicate the child's present level of performance. The child's ability includes intellectual, mental, social, and physical capabilities. The student's age, grade, and amount of learning to date must be considered when setting goals. Equally important are the student's strengths and weaknesses.

Hayes continues by suggesting that there should be a relationship between the long-term goals and the present level of performance of the student. She points out that the psychoeducational assessment data must be made available during the IEP developmental period in order that goals and objectives can be established and goes on to report that "... the basic analysis of the child's needs is provided by the diagnostic evaluation report."

Morrissey and Safer (1977) have concluded that P.L. 94-142 requires components that are reflective of the diagnostic/prescriptive approach to instruction. Abeson and Weintraub (1977) have reported that in recent years critical importance has been placed on determining the learning styles of individual children. This trend is confirmed through the requirement that each child receiving special education have an IEP developed to meet his unique needs as evidenced in the psychoeducational assessments.

In order to individualize instruction for handicapped children, resources are needed to help identify each child's strengths and weaknesses, to determine sequences of instructional objectives, and to provide the content of instruction (Olsen, 1976). Among his seven basic assessments for instruction, Higgins (1977) has listed two items that aid in the individualization of instruction. These elements state that:

1. Assessment information forms the basis for all long-term and short-term goals and instructional objectives necessary to meet the child's special education needs.

2. Labels do not indicate performance levels. The evaluation report should include a statement of whether the child has specific learning needs requiring special education; the basis for making the determination; the relevant behavior noted during the observation of the child in the child's regular class setting; the relationship of that behavior to the child's academic functioning and the educationally relevant medical findings.

Gotts (1976) has indicated that a sound diagnostic evaluation should result in: (1) a clear understanding of the child's level of functioning in various developmental areas as well as (2) an understanding of deficit areas that need attention. According to Gotts, specific areas that should be included in the IEP are the:

1. level of instruction
2. type of instruction
3. suggested groupings
4. amount of one-to-one time required
5. avenue to developing motivation

6. behaviors targeted for early modification

7. kinds of curriculum areas and/or instructional materials to try first.

A national survey of the content and quality of IEPs as required by P.L. 94-142 has been funded by BEH and conducted by the Research Triangle Institute (RTI Project No. RTI/1544/04-01I). In the Institute's interim report (May 1978), it is stated that the definition of the IEP (P.L. 94-142, Section 602) does not require the inclusion of data relating to the nature of the handicapping condition or diagnostic data. This raises two issues. Exclusion of such critical data negates the importance of the diagnostic/instructional link. The literature, however, advocates the establishment of just such a link. The second issue raised by the Institute's report concerns the ability of the LEA to develop a program to meet the unique needs of the learner. This, in turn, leads one to question the ability of the LEA to account to parents and State Departments of Education as required by P.L. 94-142. Ignoring such vital information raises questions concerning the ability of the LEAs to substantiate their IEP developmental process and the basis for the goals and objectives developed.

PROCEDURES

This chapter describes the sample population, the methodology, and the statistical analyses that were utilized in this investigation.

Sample Population

The superintendents or special education directors from 47 LEAs in Connecticut were initially contacted by letter (Appendix A) from the State Department of Education informing them of and asking their participation in this investigation. A follow-up telephone call was made to each administrator in order to ascertain the number of cities and towns that would be involved in this investigation.

Those administrators participating in this study were instructed to photocopy and mail to the University of Connecticut 5 to 10 IEPs and the corresponding psychoeducational assessments. The IEPs and assessment data were secured from the individual folders of the subject population and all child identification information was removed by the LEAs prior to the data being forwarded to the University.

The information obtained from each LEA was randomly selected with regard to handicapping condition and age/range level. The one constraint placed upon the selection process was that only the handicapping conditions of Educable Mentally Retarded (EMR), Emotional Disturbance (ED), and Learning Disability (LD) were to be selected.

Three hundred sets of information were obtained from 37 of the 47 cities and towns participating in this investigation. Fifty-seven cases were discarded due to one of two facts: either the diagnostic labels assigned to the children were other than the EMR, ED, or LD classification, or the diagnostic label was not reported.

Two assumptions were generated through this selection procedure. We must assume a biased sample regarding the state of the art within Connecticut. The assumption that the schools sent a selection of what they considered to be adequate IEPs (at the very least, they did not send their worst) becomes highly significant when data which should be present is omitted. The second assumption generated through the selection procedure was that the needs specific to the handicapping condition would be reflected within the goals and objectives of the IEP.

Methodology

Short-term instructional objectives in the areas of mathematics, reading, and spelling were examined across handicapping conditions. The form utilized in the collection of the objectives appears in Appendix B.

Information relative to the required components of the IEP were recorded on survey sheets (Appendix D). Each IEP was examined for the inclusion of: diagnosis; date of birth; grade; sex; date of initial special education placement; length of time in present placement; type of placement; date of most recent psychoeducational assessment; tests utilized; date of IEP formulation; positions of those involved in IEP formulation; amount of time in regular class; amount of time in special education; date of review; parental approval of IEP; and evidence of evaluation procedures.

Statistical Analysis

Data relative to objectives and required components of the IEP was analyzed through the procedure of frequency distribution. This data along with individual identification numbers was transcribed onto coding sheets and then punched onto IBM cards. Analysis of this data was performed using the established procedures from the SPSS Package of Programs (Nie, Hull, Jenkins, Steinbrenner, and Burt, 1975). An IBM 360 computer was used for processing.

RESULTS AND DISCUSSION

Missing Data

Section 602 of the Education for All Handicapped Children Act of 1975 stipulates the items that should be included in the IEP. The first data to be analyzed examined information missing from the IEPs. Table 1 contains the summary data relative to missing information.

TABLE 1

Evidence of Missing Data in IEPs

		Present Levels	Objectives/ Goals	Educational Services	Reg. Class Participation	Special Class Participation	Initiation & Duration Dates	Evaluation	Parental Approval
YES	Present Number of Cases	108	240	246	97	189	211	201	128
	Percentage	36%	80%	82%	32%	63%	70%	67%	43%
NO	Missing Number of Cases	192	60	54	203	111	89	99	172
	Percentage	64%	20%	18%	68%	37%	30%	33%	57%
	Total Number of Cases	300	300	300	300	300	300	300	300

(1) A Statement of the Present Level of Academic Performance

The absence of performance data from more than one-half (64%) of the IEPs raises two issues regarding IEP development; development of goals and objectives, and evaluation of growth. The bottom line is that without knowledge of the learner's current functioning level, it is impossible to develop adequate goals and objectives; and, without knowledge of the student's entry level one cannot determine if any growth has occurred.

(2) A Statement of Annual Goals Including Short-Term Instructional Objectives

Several issues regarding the potential for an individualized program in 20 percent of the cases need to be examined relative to this information. First, the short-term instructional objectives provide the intermediate steps toward the long-term goal. Absence of such intermediate steps precludes the ability of the teacher to reach the long-term goals. Furthermore, without short-term instructional objectives we must seriously question the ability of an IEP to address the unique needs of the learner.

Examination of the IEPs for the inclusion of short-term instructional objectives brought to light another problem. There appears to be confusion among educational professionals in attempting to distinguish between long-term goals and short-term instructional objectives. This confusion was apparent in objectives being identified as goals and vice versa. The problem may very well be traced back to a failure on the part of teacher education personnel in colleges and universities to adequately present these concepts.

(3) A Statement of the Specific Educational Services to be Provided to Each Child

For the purposes of this investigation, specific educational services included speech, family and individual psychotheraphy, as well as placement into resource, self-contained, and/or other environments. The omission of the type of educational services in 18% of the cases raises doubt concerning the provision of services to students with "unique" needs.

(4) The Extent to Which Each Child Will Participate in Regular Educational Programs

It is logical to assume that the IEP of a child receiving services would include the amount of time to be spent in regular education and the amount of time spent in special education. Given the fact that one hundred and eighty-four (61%) of the three hundred IEPs noted resource room involvement, implying participation in both regular and special education, questions must be raised concerning the ability of the IEPs to meet the "all day" needs of the student. A child is in school 6 hours a day, 5 days a week, and as such, his educational program should incorporate plans for meeting the child's unique needs throughout the school day.

(5) The Projected Date for Initiation and Anticipated Duration of Such Services

The projected date for initiation of special education services was designated in less than 3% of the cases. The investigators presumed that the date for initiation would commence shortly after the date of IEP formulation. Therefore, the date of IEP formulation was added to the group which designated the projected date for initiation. Eighty-nine of the three hundred cases (30%) failed to report either the date of formulation and/or the date for the initiation of special education services.

(6) Appropriate Objective Criteria and Evaluation Procedures and Schedules for Determining Whether Instructional Objectives are Being Achieved

Given the absence of evaluation procedures for determining whether instructional objectives were being met, one must seriously question the ability of educators to monitor the efficacy of instructional methodologies. Without proper evaluation techniques, serious doubt is also raised regarding the accuracy of the development of future instructional objectives.

Section 602 also stipulates that certain individuals be involved in the formulation of the IEP. Evidence of participation in the IEP formulation process by these individuals was examined. Summary data of this investigation appears in Table 2. Examination of this Table reveals that in a significant number of cases, appropriate involvement of personnel is not being observed. More interestingly, the results of this examination concur with the findings of Yoshida, Fenton, Maxwell, and Kaufman (1977). Yoshida et al. (1977) were involved in research conducted by the Bureau of Education for the Handicapped regarding the Planning and Placement Team (PPT) process that results in the development of an IEP. Their research and findings are based upon a comprehensive questionnaire completed by more than 1400 PPT members representing 240 Planning and Placement Teams in Connecticut. One important finding was that regular teachers participated less than other members of the group. These same teachers were found to be less satisfied with the process and decisions of the group (Fenton, Yoshida, Maxwell, and Kaufman, 1977). Parental involvement was found to be limited to the provision of information and did not include active involvement in making decisions about their child's program (Yoshida et al., 1977). The overall findings within this section of the investigation are consistent with the findings of Yoshida et al. (1977) indicating that very little has changed in the make-up of PPTs since the previous study.

In thirty-nine of the three hundred cases (13%) only one person, the special education teacher, was involved in the formulation of the IEP. Thus, it would appear that in some cases, the special education teacher alone was responsible for meshing the diagnostic data into an instructional program designed to meet the unique needs of the learner. Questions can be raised concerning the ability of the special education teacher to adequately interpret the psychoeducational assessment data and translate all administrative requirements of Section 602.

TABLE 2

School Personnel Involved in Formulation of Individual Educational Plans*

	Number Involved	[%]	Missing Data	[%]
Principal	80	27	220	73
Referring Teacher	45	15	225	85
Receiving Teacher (Sp. Ed. Teacher)	135	45	165	55
Parent	77	26	223	74
Psychologist	77	26	223	74
Subject Area Teachers	34	11	266	89
Other**	81	27	219	73
Child	1	.3	299	99.7

*In 26 instances the LEAs removed the names and positions of those involved in the formulation of the IEP. The totals under the Involved and Missing Data columns, therefore, can only be regarded as approximate.

**Others: Assistant Principals, Speech Therapists, Special Education Directors, and Assistant Directors, Nurses.

In one hundred and ninety-nine of the three hundred cases (66%) there was no indication within the IEP as to whom had been involved in its formulation. The lack of data for these cases prevents the investigators from making a conclusive statement concerning personnel involvement in the IEP developmental phase. Furthermore, the possibility that information concerning participant involvement was not recorded also contributes to the conservativeness of the conclusion. Yet, the data that was collected does point to a need to review current practices in developing Planning and Placement Teams.

The investigators were unable to determine whether the LEAs sought cooperation from parents but did not receive it, or whether the rights of parents were violated through non-notification. The results clearly call for further examination into what role PPT members envision as belonging to the parent.

Evidence of missing data in the IEPs examined reveals a need to review the requirements contained in Section 602 of P.L. 94-142. Clearly, there is confusion among those individuals charged with IEP formulation relative to the data which must be included. Steps, in the form of inservice training, must be taken to assure that LEA officials have a clear understanding of those items that are required by law and the methods by which to ensure their inclusion.

Diagnostic/Instructional Link

This section investigates the relationship between the assessed needs and instructional concerns as expressed in the IEP. This relationship is based upon the assumption that a special education program will reflect the unique needs of the handicapped student. The research and findings reported here and in the section on Objectives are the results of a study utilizing the same data conducted by the senior author of this monograph (Schenck, 1979).

The first analyses of the data examined the extent to which a systematic relationship exists between the psychoeducational assessment and the long-term goals of the IEP. In order to determine the extent to which such a relationship exists, patterns of responses were placed into a two element binary pattern comparing the recommendations of the psychoeducational assessments with the long-term goals. This data, combined across handicapping conditions, was analyzed through the procedure of contingency table analysis and single-sample chi-square (χ^2) with phi as the related measure of association. Table 3 summarizes the results of this analysis. Examination of Table 3 reveals weak relationships existing in four of the five categories (affective, cognitive, achievement, learning patterns). A moderate relationship in the category of Other (phi = .50) was the strongest evidenced. Examination of the χ^2 results lend support to the obtained phi values.

TABLE 3

Contingency Table Analysis and Chi-Square (χ^2) Results
Examining the Relationship Between the Psychoeducational Assessments
(PA) and the Long-Term Goals (LTG) for the LD, ED, and EMR Populations

CATEGORY	NUMBER [1]	PA/LTG NO/NO	PA/LTG NO/YES	PA/LTG YES/NO	PA/LTG YES YES	CHI SQUARE	PHI
AFFECTIVE	238(5)	111	31	51	45	15.40*	26
COGNITIVE	238(5)	144	6	80	8	1.8*	10
ACHIEVEMENT	238(5)	21	47	26	144	6.50*	18
LEARNING PATTERNS	238(5)	103	11	97	27	5.64*	1?
OTHER	240(3)	143	2	32	44	51.21*	50

1 — Numbers in parentheses indicate missing cases
Significance levels for chi-square values (df = 1):

*p < .0001
*p < .2
*p < .01
*p < .02
*p < .0000

The statistical independence between the recommendations of the psychoeducational assessments and the long-term goals developed within these areas in conjunction with the low phi values, indicative of weak relationships, lead to the conclusion that no significant relationship exists within the areas of affective, achievement, and learning patterns.

Conversely, the obtained phi value (.50) in conjunction with the chi-square ($\chi^2 = 51.21$, $p < .0000$) indicates the existence of a moderate relationship in the area labeled Other. While the results point to the existence of some type of systematic relationship within this area, there is no strong support for the conclusion that a significant relationship exists between the recommendations of the psychoeducational assessments and the long-term goals within this category.

The second set of data to be analyzed examines the extent to which a systematic relationship exists between the psychoeducational assessments and the short-term instructional objectives of the IEP. Statistical procedures employed in the first analysis of data were utilized. Table 4 summarizes the results of this analysis and reveals weak relationships in four of the five areas (affective, cognitive, achievement, learning patterns). Examination of the x^2 results shows support of the obtained phi values.

TABLE 4

Contingency Table Analysis and Chi-Square (χ^2) Results Examining the Relationship Between the Psychoeducational Assessments (PA) and the Short-Term Instructional Objectives (STIO) for the LD, ED, and EMR Populations

CATEGORY	NUMBER[1]	PA/STIO NO/NO	PA/STIO NO YES	PA/STIO YES/NO	PA/STIO YES/YES	CHI SQUARE	PHI
AFFECTIVE	238(5)	125	17	63	33	16.00*	.27
COGNITIVE	243	142	12	80	9	15*	04
ACHIEVEMENT	240(3)	25	45	34	136	5.80*	17
LEARNING PATTERNS	240(3)	107	9	106	18	2.10*	11
OTHER	240(3)	148	15	44	33	35.00*	40

1 Numbers in parentheses indicate missing cases.
Significance levels for chi square (χ^2) values (df = 1):

*p < .0001
*p < .7
*p < .02
*p < .2
*p < .0000

The phi value (.40) for the fifth area (Other) reveals the existence of a moderate relationship between the psychoeducational assessments and the short-term instructional objectives. The large chi-square value ($x^2 = 35.00$, $p < .0000$) indicates the existence of some type of systematic relationship; yet, both the obtained phi and chi-square values are weak. Therefore, the conclusion that a significant relationship exists is not warranted.

The results of this section show that there is no basis for assuming that a significant relationship exists between the diagnosed needs of handicapped children and the educational programs developed for them. This is inconsistent with current thinking among professionals involved in special education. As reported earlier, the literature has consistently called for the establishment of a diagnostic/instructional link. Its absence raises questions concerning the efficacy of the education being developed for special needs children. If diagnosed needs are not apparent in the long-term goals and short-term instructional objectives of the IEP, then one must seriously question the existence of *specially designed instruction.*

Objectives

A third area of concern relative to the existence of *specially designed instruction* revolved around the type of objectives developed within each handicapping condition. It was assumed that the objectives would reflect the uniqueness of the various handicapping conditions. Specifically investigated, was the degree to which the short-term instructional objectives would vary across handicapping conditions. To this end, objectives in the areas of math, reading, and spelling were collected from the IEPs of those students identified as LD, ED, and EMR. In addition, the test grade equivalents for each area were also noted. Only those IEPs that evidenced both test

grade equivalents and objectives within the three areas were counted. A total of 118 IEPs were included in this section. Numerous IEPs contained either test grade equivalent scores with no corresponding objectives or objectives with no reported test grade equivalent scores.

Test grade equivalents were grouped into six grade ranges covering no more than one grade level and no more than four grade levels (.1 - .9; 1.0 - 1.9; 2.0 - 3.9; 4.0 - 5.9; 6.0 - 7.9; 8.0 - 12.0). The numbers of students within each disability category evidencing a specific objective were tabulated by test grade equivalent ranges. Tables 5 through 7 contain the summary results of the examination of objectives across disability by test grade equivalent. A complete breakdown of the objectives within each area can be found in Appendix E.

The results of the examination of math objectives across disability by test grade equivalent are reported in Table 5. Objectives were divided into fourteen categories. This Table reveals that similar objectives tend to be utilized across handicapping conditions and test grade equivalents. No clear patterns emerged specific to handicapping conditions. In light of these results, one might conjecture that there is no apparent sequential development of mathematical concepts for handicapped children. It is also apparent that the IEPs of the LD child contain far more objectives than any of the other categories. Those developed for the EMR child contained objectives that stress computational skills and daily living skills (time, money, and calendar skills). Very few math objectives were included in the IEPs developed for ED children. Goodstein, Kahn, and Cawley (1975) concluded that there appeared to be a relationship between the age at which special needs children began to evidence slower growth and the age of typical placement of children in special education. The math objectives gathered from the IEPs of the handicapped students appear to reflect the point advanced by Goodstein et al., (1975). Students involved in special education receive scattered objectives across disability areas which would preclude any developmental growth in the area of mathematics.

TABLE 5

Evidence of Math Objectives Across Handicapping Conditions by Test Grade Equivalent

GRADE RANGE	.1 – .9			1.0 – 1.9			2.0 – 3.9			4.0 – 5.9			6.0 – 7.9			8.0 – 12.0		
HANDICAP	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR
Numeration	12		1	3			10	1			1							
Place Value	1						5											
Time Skills	1		1	1			2											
Money Skills		1	1	8	1		3											
Geometry							1				1							
Measurement	1						9	1	2	1	1							
Addition	4		1	3			22	1	4									
Subtraction	3		1	4			17	1	3									
Multiplication				1			7	1	6	2			3					
Division							4		1	2								
Fractions	1			1			5	1	9		1		4					
Decimals							3		4									
Calendar Skills								2	3									
Miscellaneous							2			1								

OBJECTIVES

Table 6 summarizes the data from the examination of reading objectives across handicapping conditions by test grade equivalents. Objectives were divided into the categories of: Alphabet Skills, Language Arts, Phonics, and Reading Skills. An examination of Table 6 reveals that, like the math objectives, similar objectives tend to be utilized across handicapping conditions and test grade equivalents. The vast majority of the objectives gathered from the IEPs fell within the area of Phonics.

TABLE 6

Evidence of Reading Objectives Across Handicapping Conditions by Test Grade Equivalent

	GRADE RANGE	.1 – .9			1.0 – 1.9			2.0 – 3.9			4.0 – 5.9			6.0 – 7.9			8.0 – 12.0		
	HANDICAP	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR
OBJECTIVES	Alphabet Skills	2		1	6		1	1	2										
	Language Arts	1			13	3	7	4	2						1				
	Phonetics	8			52	4	10	42	5	6	23			8	1				
	Reading	1			39	1	1	20	2	5	9			2			1		

Although the LD group received the widest variety of reading objectives across all categories, the objectives were scattered. This again raises the question of the existence of sequential development within the area of reading.

The third category of objectives to be examined, Spelling, revealed the least number of objectives, as illustrated in Table 7. These objectives were divided into the areas of: Phonetic Skills, Language Arts, and Miscellaneous. Again, similar objectives tend to be utilized across handicapping conditions and test grade equivalents. As was apparent in the other two areas examined, the LD category received a wide variety of spelling objectives while both the ED and EMR groups evidenced virtually no objectives within this area. Yet, the scattering of the type of objectives points to the lack of any systematic approach to the teaching of spelling skills.

TABLE 7

Evidence of Spelling Objectives Across Handicapping Conditions by Test Grade Equivalent

	GRADE RANGE	.1 – .9			1.0 – 1.9			2.0 – 3.9			4.0 – 5.9			6.0 – 7.9			8.0 – 12.0		
	HANDICAP	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR
OBJECTIVES	Phonetics	6			27	2		34	3	2	8								
	Language Arts				1			1?	2	4	1								
	Miscellaneous *	1			6	2		10	1	2	1								

* Letter formation and general word lists.

An examination of all three tables indicates that not only are similar objectives being utilized across handicapping conditions, but that objectives are not varying across test grade equivalents. This leads one to question the efficacy of various treatment interventions and instructional strategies, in addition to the sensitivity of diagnostic instruments. The lack of objectives beyond the fourth grade level might be indicative of the failure on the part of educators to provide handicapped children with the necessary skills and learning experiences required to attain higher grade equivalents on achievement tests. The results might also indicate that we are providing handicapped children with only those skills that teachers believe are necessary and/or important for success in daily living. Whatever the reason, the results of this examination indicate a need to review the curricular materials and instructional practices used with handicapped children.

Continuing the investigation for a diagnostic/instructional link, a comparison of those cases having received a specific diagnostic need and the presence of an objective relative to that need was examined. The areas of reading and math were explored relative to the frequency of diagnostic tests and the frequency of corresponding objectives. This data is displayed in Tables 8 and 9.

TABLE 8

Evidence of Diagnosis (Math) by Objectives Across Handicapping Conditions

	Evidence of Math Diagnosis	Evidence of Math Objectives
Handicapping Condition	Number of Cases	Number of Cases
LD	29	118
ED	3	10
EMR	0	17

TABLE 9

Evidence of Diagnosis (Reading) by Objectives Across Handicapping Conditions

	Evidence of Reading Diagnosis	Evidence of Reading Objectives
Handicapping Condition	Number of Cases	Number of Cases
LD	39	71
ED	5	14
EMR	1	15

In all instances there were more cases with objectives than there were cases in which tests specific to math or reading were administered. This overabundance of cases with objectives would tend to negate the premise that a relationship exists between assessment and instruction. It logically follows that it is unlikely that a relationship could exist between assessment and instruction if there is no assessment.

Based upon the results of this section of the investigation, the expectation that the objectives would reflect the uniqueness of the various handicapping conditions was not supported by this data.

Other Relevant Data

This section examines additional data which the investigators believe holds some relevance to the development of Individualized Educational Programs.

(1) Missing Diagnostic Labels

The specific handicapping condition was not reported in twenty-four cases. While it is recognized that a diagnostic label does not lead to a remediation, it does give directionality for further investigation regarding learning and instructional strategies.

(2) Missing Grade Levels

The grade level placement was missing from eighty-nine of the three hundred cases (30%). Since all day programming through mainstreaming is in vogue, the grade placement would tend to hold appreciable significance.

(3) Significant Relationships

The relationship of diagnostic condition to sex was explored. The relative frequencies are illustrated in Table 10. The higher frequency of males over females is indicative of the tendency to identify males as exhibiting handicapping conditions more so than females.

TABLE 10

Handicapping Condition by Sex*

Condition	Male	Female	Sex Not Reported	Total
LD	119	45	22	186
ED	18	8	3	29
EMR	6	14	8	28
Other (Speech, Hearing, etc., including those cases not indicating a diagnostic label).	17	7	33	57
Totals	160	74	66	300

*Only two hundred and thirty-four cases reported both handicapping condition and sex.

Tests Utilized to Determine Handicapping Conditions

The tests utilized to determine the handicapping conditions of LD, ED, and EMR were examined with the results being shown in Table 11. This table illustrates the frequency of intelligence, perceptual motor, projective, and achievement tests across handicapping conditions. It would appear that the learning disabled population was administered a wider variety of evaluation instruments than any other handicapping condition. This might be a function of the diagnostic procedure which "rules out" handicaps and determines learning disabilities by excluding all other conditions. The use of greater numbers of evaluation instruments with the learning disabled population may be the reason for the greater frequency of objectives for this group. A need to assess other handicapping conditions with a wider variety of instruments is indicated by this table.

Appendix E contains additional tables relative to tests utilized and assessed needs without objectives in the areas of reading, math, and spelling.

TABLE 11

Tests Utilized to Determine Handicapping Conditions

HANDICAP	LD	ED	EMR	TOTAL
	(186)	(29)	(28)	(243)
IQ Tests				
WISC	9	2	2	13
WISC-R	74	10	12	96
PPVT	29	5	5	39
Binet	7	2	3	12
Other	27	5	2	34
Perceptual-Motor Tests				
Purdue	2	–	–	2
Bender-Gestalt	65	10	12	87
Frostig	6	–	–	6
Beery	22	2	–	24
Benton	4	–	1	5
Harris	–	–	–	0
Other	21	1	3	25
Projective Tests				
House-Tree-Person	15	4	1	20
Draw A Man	14	3	2	19
T.A.T.	11	4	1	16
C.A.T.	1	2	–	3
Rorschach	6	3	–	9
Sentence Completion	26	6	1	33
Other	42	12	8	62
Psycholinguistic Tests				
I.T.P.A.	23	1	–	24
Parsons	1	1	–	2
Psycholinguistics	–	1	–	1
Other	27	2	1	30
Achievement Tests				
WRAT	59	6	8	73
Iowa	1	–	–	1
Stanford	–	1	–	1
SRA	–	–	–	0
Peabody	33	4	3	40
Other	3	3	1	7

CONCLUSIONS AND RECOMMENDATIONS

This investigation has focused upon the question, "What is the State of the Art in the Development of Individualized Educational Programs within the borders of Connecticut?" Specific questions regarding the evidence of information necessary to the formulation of an IEP and the relationship between psychoeducational assessments, and the long-term goals and the short-term instructional objectives of the IEP were also investigated.

A significant number of cases had missing data specific to the IEP requirements of Section 602 of P.L. 94-142. The results also failed to support the perspective that objectives would reflect the uniqueness of the various handicapping conditions. Furthermore, the idea that a relationship would exist between the results of the psychoeducational assessments and the goals and objectives of the IEP was not substantiated. A number of cases were found to lack designation of the particular handicapping condition and grade placement information. Given the current emphasis on mainstreaming, the absence of this information takes on importance when considering instructional programming in regular education. No clear pattern of test utilization specific to handicapping conditions emerged from this investigation.

Examination of the current state of the art in IEP development within Connecticut has indicated serious problems. There is apparent confusion among professionals regarding the mechanics of developing the IEP and what required data must be included. Of extreme importance is the inability of those IEPs examined to account for a child's "all-day" needs. To assume that the unique needs of the child begin and end within the confines of a resource room is to deny the fact that the child carries his deficits twenty-four hours a day. Furthermore, exclusion of alternate instructional methodologies for the regular classroom teacher negates the need for the guidance and aid that must be provided within the regular education sector if the handicapped child's education is ever to be reflective of *specially designed instruction.*

Results of this investigation have indicated that the long-term goals and short-term instructional objectives of the Individualized Educational Program have limited foundation in psychoeducational assessments. Thus, the extent to which current IEPs are addressing the unique needs of the learner must be seriously questioned.

Utilization of diagnostic data as the basis for educational programming has been advocated by leaders in the field of special education from Haeussermann (1958) to Ysseldyke and Salvia (1978). Procuring diagnostic data solely for purposes of differential diagnosis denies the need to address the individual learning requirements exhibited by the learner. While diagnostic terms may implicate a certain management technique, the specific learning needs of the individual are not inherently apparent in a label. Therefore, the assumption that children with identical diagnostic labels require the same type of instruction negates the importance of uniqueness among all individuals. Furthermore, failure to incorporate the psychoeducational assessment results in the IEP during the developmental phase is to deny the child *specially designed instruction.* Without an educational program that incorporates *specially designed instruction,* there can be no special education (Schenck, 1979).

Examination of Tables 3 through 5 further accentuates the problem in the provision of *specially designed instruction.* Instruction reflective of unique learner needs should be apparent not only in the existence of a relationship between the psychoeducational assessment and the IEP, but also in the type of objectives developed. Different handicapping conditions pose different sets of general learning requirements and needs. It would be expected that differences would occur in objectives across handicapping conditions. Such is not the case. Special needs students are receiving the same objectives regardless of handicapping condition. Therefore, the role of special education seems to be rather singular. One would assume that if instruction is truly *specially designed,* there would be some variation across handicapping conditions respective to the type of objectives being developed. Moreoever, it was also noted that objectives do not vary across test grade equivalents. That is, children in the upper test grade ranges are receiving the same objectives as children in the lower test grade ranges. This was not only evidenced within handicapping conditions, but across handicapping conditions. One must seriously question the efficacy of special education if LD students in the upper ranges of test grade equivalent scores are the recipients of the same objectives as EMR students in the lower test grade equivalent ranges.

An examination of Tables 3 through 5 reveals that the LD student receives far more objectives across the areas of reading, math, and spelling than do ED or EMR children. This situation has been attributed to the type of assessment practices currently utilized in the field. Examination of diagnostic procedures has indicated that the LD child is the recipient of a multidisciplinary assessment, while the EMR child, for the most part, receives only an intelligence test and an achievement test. It might well serve special education professionals to review current assessment practices with regard to ED and EMR children.

The lack of a relationship between the psychoeducational assessments and the long-term goals and short-term instructional objectives highlights the lack of existence of *specially designed instruction.* The inability to trace goals and objectives back to diagnostic data raises serious doubts concerning the efficacy of current educational programs. The responsibility for such a situation does not lie with any one profession. Rather, it is a combined problem. Lack of communication between psychologists and teachers can account for one aspect of this problem. Likewise, the relative lack of training, by both psychologists and teachers, in the process of relating diagnostic information into *specially designed instruction* is also a contributing factor. The scattering of objectives in the areas of reading, math, and spelling clearly indicates confusion on the part of educators as to the developmental sequences within these areas. This point raises questions concerning the efficacy of current curricular materials and instructional methodologies.

Special education as evidenced in the existence of *specially designed instruction* was not apparent in those IEPs examined by Schenck (1979). Where relationships were evidenced between psychoeducational assessments and long-term goals and/or short-term instructional objectives, they were very weak. As previously mentioned, this lack of ability to trace goals and/or objectives to the diagnostic information about the child raises questions concerning the effectiveness of special education. Pertinent and specific instructional strategies to be utilized which would enhance a child's learning capability were evidenced in very few of the short-term instructional objectives which are considered to be the backbone of the instructional program. It would seem that the degree to which goals and objectives reflect the unique learning needs of the child is not a major determinant during the IEP developmental phase (Schenck, 1979).

Considering the fact that educators over the last ten years have advocated instruction that reflects unique learning needs, this area should not pose a problem for special educators. Yet, it does. If it is so monumental a task to develop, IEPs and diagnostically based goals and objectives, then one must question the efficacy of special education.

The findings of this investigation have identified serious needs in special education that must be addressed. The results clearly indicate a need for inservice training in two areas specific to Individualized Educational Programs. First, there is a need for clarification regarding the content necessary for IEP development. Second, training in the process of relating the diagnostic data to an appropriate educational program designed to meet the unique needs of the child is indicated.

The results evidenced by this investigation can in no way be considered confined to the State of Connecticut. The authors posit that if a similar investigation were to be conducted in any of the other states, analogous results would be found. The State of Connecticut and those LEAs participating in this investigation are providing educational services to the handicapped. Indeed, they are doing an admirable job. But, in any area of service provision there is room for improvement and a refinement of skills. The educators of Connecticut must be commended for their willingness to open their files to scrutiny. Their responsiveness to the needs of this investigation will aid in the improvement of educational provisions for the handicapped.

BIBLIOGRAPHY

Abernathy, G. L. *The idea of equality.* Richmond, Va.: John Knox Press, 1959.

Abeson, A. Movement and momentum: Government and education of handicapped children. In *Educational resources and perspectives.* Boston: Houghton Mifflin, 1974.

Abeson, A., & Weintraub, F. Understanding the individualized education program. In *A primer on individualized education programs for handicapped children.* Reston, Virginia: Council for Exceptional Children Publication, 1977.

Abeson, A., & Zettel, J. The end of the quiet revolution: The Education for All Handicapped Children Act of 1975. *Exceptional Children,* October 1977, *44*(2).

Abramson, J. Selective instruction. In *Ann ae l'enfrance,* 1927, *1,* 83-85.

Anastasi, A. *Mental measurements yearbook.* New Brunswick: Rutgers University Press, 1938.

Arranto, G. C. An individually prescribed instructional program using behavioral objectives with primary EMR children. *Dissertation Abstracts,* March 1973, Vol. 33(9-A), 4973.

Bannatyne, A. Diagnostic and remedial techniques for use with dyslexic children. *Academic Therapy Quarterly,* 1968, *3,* 213-224.

Bannatyne, A. Diagnosing learning disabilities and writing remedial prescriptions. *Journal of Learning Disabilities,* 1969, *1,* 242-249.

Bateman, B. Implications of a learning disabilities approach for teaching educable retardates. *Mental Retardation,* 1967, *5,* 23-25(a).

Bateman, B. Three approaches to diagnosis and educational planning for children with learning disabilities. *Academic Therapy Quarterly,* 1967, *3,* 11-16(b).

Belmont, L., & Birch, H. G. The intellectual profile of retarded readers. *Perceptual and Motor Skills,* 1969, *29,* 179-186.

Benton, A. L. Dyslexia in relation to form perception and directional use. In J. Money (Ed.), *Reading disability: Progress and research needs in dyslexia.* Baltimore: Johns Hopkins Press, 1962.

Bernal, E. A response to educational uses of tests with disadvantaged subjects. *American Psychologist,* 1975, *30,* 93-95.

Bernal, E. Perspectives in nondiscriminatory assessment. In T. Oakland (Ed.), *With bias toward none: Nonbiased assessment of minority group children.* Lexington, Ky.: Coordinating Office for Regional Resource Centers, 1976.

Bijou, S. W. What psychology has to offer education - now. *Journal of Applied Behavioral Analysis,* 1970, *3,* 65-71.

Blake, M. F. *An assessment of practices for the implementation of the individualization function in Connecticut middle schools.* Unpublished doctoral dissertation, University of Connecticut, 1976.

Bonham, S. J. P.L. 93-380 - A bill of rights for the handicapped. *Focus on Exceptional Children,* September 1975, 7(4).

Bouchard, J. B., & Nelson, K. G. A pupil-oriented and individualized system of education: Guidelines for implementation. Bethesda, Md.: 1971. (ERIC Document Production Service, ED-056-969)

Bruner, J. S. *Toward a theory of instruction.* Cambridge, Mass.: Harvard University Press, 1966.

Burns, R. Methods for individualizing instruction. *Educational Technology,* January, *11*(6), 55-56.

Calder, C. R. *The curriculum-instruction continuum with respect to mainstreaming of handicapped children.* Storrs: University of Connecticut, 1977.

Caldwell, O. W., & Courtis, S. A. *Then and now in education - 1845:1923.* Yonkers-on-Hudson, N.Y.: World Book Company 1924.

Cartwright, G., Cartwright, C., & Ysseldyke, J. E. Two decision models: Identification and diagnostic teaching of handicapped children in the regular classroom. *Psychology in the Schools,* 1973, *10,* 4-11.

Cawley, J. F. *Individualized instruction.* Storrs: University of Connecticut, 1974. (Mimeo)

Cawley, J. F. *Children with special needs: Selected program factors.* A report for the Department of Education of the Commonwealth of Massachusetts, July 1975.

Cawley, J. F. Curriculum: One perspective for special education. In R. D. Kneedler & S. Tarver (Eds.), *Changing perspectives in special education.* Columbus: Chas. Merrill Publishing Co., 1977.

Cawley, J. F., & Fitzmaurice, A. M. *The individualization of instruction: Illustrations from arithmetical programming for handicapped children.* Unpublished manuscript, Storrs: University of Connecticut, 1974.

Coleman, J. C., & Rasof, B. Intellectual factors in learning disorders. *Perceptual and Motor Skills,* 1963, *16,* 139-152.

Connolly, J. A., & Hoaglund, M. L. Adopting instruction to school objectives and student needs. *Educational Technology,* April, *12*(4), 31-34.

Coulter, W. A., & Morrow, H. W. *The concept and measurement of adaptive behavior within the scope of psychological assessment.* Austin, Texas: Texas Regional Resource Center, 1977.

Coulter, W. A., & Morrow, H. W. What is psychological assessment? Identification versus intervention. Texas Learning Resource Center, Division of Special Education, Texas Education Agency, 1978. (Mimeo)

Courtis, S. A. Contributions of research to the individualization of instruction. *Yearbook of the National Society of Student Education,* 1938, *37*(2), 201-210.

Critchley, M. *The dyslexic child.* Springfield: Chas. C. Thomas, 1970.

Cronbach, L. J. How can instruction be adapted to individual differences? In R. M. Gagne (Ed.), *Learning and individual differences.* Columbus, Ohio: Merrill Publishers, 1967.

Dunn, R., & Dunn, K. *Practical approaches to individualizing instruction: Contracts and other effective teaching strategies.* West Nyack, N.Y.: Parker Publishing Co., 1972.

Eckstrand, G. A. Individuality in the learning process: Some issues and implications. *Psychological Record,* 1962, *12*(4), 405-416.

Edling, J. V. *Individualized instruction: A manual for administration.* Corvallis, Oregon: University of Oregon, 1971.

Eisile, J. E. *Computer assisted planning of curriculum and instruction: How to use computer-based resource units to individualize instruction.* Englewood Cliffs, N.J.: Educational Technology Publications, 1971.

Eliot, C. W. *Educational reform: Essays and addresses.* New York: The Century Company, 1898.

Eysenck, H. J. Learning theory and behavior therapy. In H. J. Eysenck (Ed.), *Behavior therapy and the neuroses.* New York: Pergaman Press, 1960.

Faur, P. *Train, don't test.* Champaign, Ill.: Children's Research Center, 1974.

Fenton, K. W., Yoshida, R. K., Maxwell, J. P., & Kaufman, M. S. *Role expectations: Implications for multidisciplinary pupil programming.* Report for the Connecticut State Department of Education, 1977.

Filler, J. W., Robinson, C. C., Smith, R. A., Vincent-Smith, L. J. Bricker, D. D., & Bricker, W. A. Mental retardation. In N. Hobbs (Ed.), *Issues in the classification of children,* (Vol. 1). San Francisco: Jossey-Bass, 1975.

Frostig, M. Testing as a basis for educational therapy. *Journal of Special Education,* 1967, *2,* 15-34.

Gallagher, J. Phenomenal growth and new problems characterize special education. *Phi Delta Kappan,* April 1972, *45,* 516-520.

Gagne, R. M. The implications of instructional objectives for learning. In C. M. Lidvall (Ed.), *Defining educational objectives.* Pittsburgh: University of Pittsburgh Press, 1964.

Garcia, V., & Pinkelton, M. The teacher's role in development. In A primer *on individualized education programs for handicapped children.* Reston, Va.: Council for Exceptional Children Publication, 1977.

Gearheart, W. R., & Willenberg, E. P. *Applicaton of pupil assessment information for the special education teacher.* Denver, Colorado: Love Publishing Company, 1974.

Gentry, D., & Harris, N. Essentials of performance measurement. In N. Haring & L. Brown (Eds.), *Teaching the severely handicapped* (Vol. 1). New York: Grune & Stratton, 1976.

Gold, M. W. *The acquisition of a complex assembly task by retarded adolescents.* Urbana: University of Illinois, Children's Research Center, 1968. (Mimeograph)

Goodstein, H. A., Kahn, H., & Cawley, J. F. *The achievement of educable mentally retarded children on the Key Math diagnostic achievement test.* Unpublished manuscript, Storrs, Conn.: University of Connecticut 1975.

Gotts, E. A. *The nature of the individualized educational program.* Paper presented at the Conference on the Implicatons of Public Law 94-142, Chicago, July 1976.

Greer, J., & Torres, D. Arranging specific educational services to be provided. In *A primer on individualized education programs for handicapped children.* Reston, Va.: Council for Exceptional Children Publication, 1977.

Haeussermann, E. *Developmental potential of preschool children.* New York: Grune and Stratton, 1958.

Hall, G. S. *Adolescence.* New York: O. Appleton Century Company, 1904.

Hall, R. Responsive teaching: Focus on measurement and research in the classroom and the home. In E. Meyen, G. Vergason, & R. Whelan (Eds.), *Alternatives for teaching exceptional children.* Denver: Love Publishing Co., 1975.

Hammill, D. Evaluating children for instructional purposes. *Academic Therapy, 6,* 1971.

Harper, W. R. Reorganization of our system of education. *School Review,* January 1903, *11,* 1-3.

Hayes, J. Annual goals and short term objectives. In *A primer on individualized education programs for handicapped children.* Reston, Va.: Council for Exceptional Children Publication, 1977.

Hayes, J., & Higgins, S. Issues regarding the IEP: Teachers on the front line. *Exceptional Children,* January 1978, *44*(4).

Hedbring, C., & Holmes, C. Getting it together with P.L. 94-142: The IEP in the classroom. *Education and Training of the Mentally Retarded,* October 1977, *12*(3).

Heiss, W. Relating educational assessment to instructional planning. *Focus On Exceptional Children,* March 1977, *9*(1).

Herrick, M. Developing individualized instruction is the difference. *Journal of Special Education,* 1972, *5,* 552-559.

Higgins, J. P. Present level(s) of performance and assessment: Some basic considerations. In *A primer on individualized education programs for handicapped children.* Reston, Va.: Council for Exceptional Children Publication, 1977.

Hirst, L. C. The usefulness of a two way analysis of WISC sub-tests in the diagnosis of remedial reading problems. *Journal of Experimental Education,* 1960, *29,* 155-156.

Huck, S. W., Cormier, W. H., & Bounds, W. G. *Reading statistics and research.* New York: Harper and Row, 1974.

Hunt, D. E. *Matching models in education: The coordination of teaching methods with student characteristics.* Canada: Ontario Institute for Studies in Education, 1971.

Hunt, D. E. Person-environment interaction: A challenge found wanting before it was tried. *Review of Educational Research,* 1975, *45,* 209-230.

Irwin, T. Implementation of Public Law 94-142. *Exceptional Children,* November 1976, *43*(3).

Jackson, G. Another psychological view from the Association of Black Psychologists. *American Psychologist,* 1975, *22,* 88-93.

Johnson, D. Educational principles for children with learning disabilities. *Rehabilitation Literature,* 1967, *28,* 317-322.

Johnson, D., & Myklebust, H. *Learning disabilities: Educational principles and practices.* New York: Grune and Stratton, 1967.

Keough, B. K., Wetter, J., McGinty, A., & Donlon, G. *Functional analysis of WISC performance of learning disordered, hyperactive, and mentally retarded boys.* Paper presented at the 80th Annual Convention of the American Psychological Association, Honolulu, September 1972.

Kirk, S. A. *Educating exceptional children* (2nd Edition). Boston: Houghton Mifflin, 1972.

Kirk, S., McCarthy, D., & Kirk, W. *Illinois Test of Psycholinguistic Abilities.* Urbana: University of Illinois Press, 1968.

Klausmeier, H., Ghatala, E., & Frazer, D. *Conceptual learning and development: A cognitive view.* New York: Academic Press, 1974.

Knapczyk, D. R. Task analytic assessment of severe learning problems. *Education and Training of Mental Retardation,* Vol. 10, 2, April 1975.

Koppitz, E. M. Bender-Gestalt test, visual, aural digit span test and reading achievement. *Journal of Learning Disabilities,* 1975, 3(F), 154-158.

Kost, D. R. Relation of individualized instruction to social acceptance, total adjustment and personal adjustment. *Dissertation Abstracts,* July 1970, *31*(1-A), 297.

Kunzelmann, H. *Precision teaching: An initial training sequence.* Seattle: Special Child Publications, 1970.

Lambert, N. M., Meyers, C. E., & Opton, E. From California: Two views. *APA Monitor,* 1977, *8*(4), 4-5.

Lerner, J. *Children with learning disabilities: Theories, diagnosis and teaching strategies* Boston: Houghton Mifflin Co., 1971.

Lilly, S. M. Evaluating individualized education programs. In *A primer on individualized education programs for handicapped children.* Reston, Va.: Council for Exceptional Children Publication, 1977.

Mager, R. F. *Preparing instructional objectives.* Palo Alto, California: Fearon Publishers, 1962.

Magnifico, L. X. The education of mentally retarded in the light of the emphasis on education of the gifted. *Educational Administration and Supervision,* 1959, *45,* 77-82.

Mann, L. Perceptual training: Misdirections and redirections. *American Journal of Orthopsychiatry,* 1970, *40,* 30-38.

Mann, L. Perceptual training revisited: The training of nothing at all. *Rehabilitation Literature,* 1971, *32,* 322-335.

Mann, L. Psychometric phrenology and the new faculty psychology: The case against ability assessment and training. *Journal of Special Education,* 1971, *5,* 3-14.

Martin, E. Individualism and behaviorism as future trends in educating handicapped children. *Exceptional Children,* March 1972, *38*(7).

McCarthy, D. *Manual for the McCarthy Scales of Children's Abilities.* New York: Psychological Corporation, 1972.

McLachlan, J. F. C., & Hunt, D. E. Differential effects of discovery learning as a function of student conceptual level. *Canadian Journal of Behavioral Science,* 1973, *5,* 152-160.

Mercer, J. R. *Anticipated achievement: Computerizing the self-fulfilling prophesy.* Paper presented at the 80th Annual Convention of the American Psychological Association, Honolulu, September 1972.

Mercer, J. R., & Ysseldyke, J. E. Designing diagnostic intervention plans. In T. Oakland (Ed.), *With bias toward none: Non-biased assessment of minority group children.* Lexington, Ky.: Coordinating Office for Regional Resource Centers, 1976.

Minge, M. R., & Ball, T. S. Teaching of self-help skills to profoundly retarded patients. *American Journal of Mental Deficiency,* 1967, *71*(5), 864-868.

Minskoff, E. Creating and evaluating remediation for the learning disabled. *Focus on Exceptional Children,* 1973, *5,* 1-11.

Morrissey, P., & Safer, N. Implications for special education: The individualized education. *Viewpoints: Bulletin of the School of Education,* Indiana University, March 1977, *53*(2).

Murray, T. A. Individualization of instruction in special learning disabilities resource classrooms: A comprehensive study. *Dissertation Abstracts,* May 1972, *32*(11-A), 6252.

Nelson, C., & Hudson, F. Predicting the reading achievement of junior high school EMR children. *American Journal of Mental Deficiency,* 1969, *74*(3), 415-420.

Newcomer, P., & Hammill, D. D. *Psycholinguistics in the schools.* Columbus, Ohio: Charles E. Merrill, 1976.

Nie, N. H., Hull, C. H., Jenkins, J. G., Steinbrenner, K., & Burt, D. H. *Statistical package for the social sciences* (2nd Edition). New York: McGraw-Hill Book Co., 1975.

Nielson, H., & Ringe, K. Visuo-perceptive and visuo-motor performance of children with reading disabilities. *Scandanavian Journal of Psychology,* 1969, *10,* 225-231.

Oen, U. T. *Investigating the interaction of learning styles and types of learning experiences in vocational-technical education.* Interim Report, Appleton, Wisconsin: Fox Valley Technical Institute, 1973.

Olsen, K. R., Martinson, M. G., Hayden, D. L., Davis, F., & Thomas, C. *Resources needed for development of individualized educational programs for handicapped children: A summary of four studies.* 1976. (Mimeo)

Owens, J. *Thursday's children: A guide to the implementation of Chapter 766.* Institute for Governmental Services, Amherst: University of Massachusetts, 1975.

Parisi, D. Individualized teaching and planned instruction. *Securities,* 1966, *51*(1), 87-110.

Piaget, J. *The origins of intelligence in children.* New York: Norton, 1952.

Piaget, J. *The construction of reality in the child.* New York: Basic Books, 1954.

Pick, A. D. Systems of perceptual motor development. In J. F. Hill (Ed.), *Minnesota symposium on child development* (Vol. 4). Minneapolis: University of Minnesota Press, 1970.

Pick, A. D. Policies for the development of written IEPs. *Exceptional Children,* May 1977, *43*(8).

Popham, W. J., & Sirotnik, K. A. *Educational statistics, use and interpretation* (2nd Edition). New York: Harper and Row, 1973.

Public Law 89-10. The Elementary and Secondary Education Act (ESEA), 1976.

Public Law 89-313. Amendment to Title I, ESEA, 1965.

Public Law 89-750. Title VI, ESEA, Amendments of 1966.

Public Law 91-230. The Elementary and Secondary Educational Amendments, 1970.

Public Law 93-112. Vocational Rehabilitation Act of 1973, Section 504, July 26, 1973.

Public Law 93-380. The Education Amendments of 1974, August 21, 1974.

Public Law 94-142. The Education for All Handicapped Children Act of 1975, November 29, 1975.

Pyecha, J. N., & Cox, J. C. *Executive summary and interim report on models for describing and assessing individualized educational programs (IEPSO) for handicapped children.* Research Triangle Park, N.C.: May 1978.

Reger, R., Schroeder, W., & Uschold, K. *Special education: Children with learning problems.* New York: Oxford University Press, 1968.

Reid, W. R., & Schoer, L. A. Reading achievement, social-class and subtest pattern on the WISC. *Journal of Educational Research, 1966, 59,* 469-472.

Remy, O. F. *An essay on teaching according to measurement.* Paris: Colin, 1926.

Resnick, L. B., Wang, M. C., & Kaplan, J. Task analysis in curriculum design: A hierarchically sequenced introductory mathematics curriculum. *Journal of Applied Behavioral Analysis,* 1973, *6,* 679-710.

Rogow, S., & David C. Special education: Perspectives, trends and issues. *Phi Delta Kappan,* April 1974, *45,* 514-516.

Rosen, C. L. An experimental study of visual perceptual training and reading achievement in first grade. *Perceptual and Motor Skills,* 1966, *22,* 979.

Rosenberg, M. B. *Diagnostic teaching.* Seattle, Washington: Special Child Publications, 1968.

Ross, S. L., DeYoung, H. G., & Cohen, J. Confrontation: Special education placement and the law. In S. Kirk & F. Lord (Eds.), *Exceptional children: Educational resources and perspectives.* Boston: Houghton Mifflin, 1974.

Sabatino, D. A. The information-processing behaviors associated with learning disabilities. *Journal of Learning Disabilities,* 1968, *1*(8), 440-450.

Sabatino, D. A., Kelley, K., & Hayden, D. C. Special education and the culturally different child: Implications for assessment and intervention. *Exceptional Children,* April 1973, *39,* 7.

Sabatino, D. A., Wickham, W., & Burnett, C. W. The psycho-educational assessment of learning disabilities. *Catholic Educational Review,* 1966, *66*(5), 227-241.

Safer, N., Lewis, L. M., Morrissey, P. A., & Kaufman, M. S. *Implications of IEPs: New teacher roles and requisite support systems.* U.S. Office of Education, 1977. (Mimeograph)

Schenck, S. J. *The relationship between the psychoeducational assessment and the development of the long-term goals and short-term instructional objectives of the IEP.* Unpublished doctoral dissertation, Storrs, Conn.: University of Connecticut, 1979.

Schiefelbusch, R. L. Introduction. In N. G. Haring & R. L. Schiefelbusch (Eds.), *Methods in special education.* New York: McGraw-Hill Book Company, 1967.

Schwartz, L. Preparation of the clinical teacher for special education: 1866-1966. *Exceptional Children,* 1967, *34,* 117-124.

Seagoe, M. W. Terman and the gifted. *Education Digest,* September 1972, *38,* 52.

Siegel, S. *Non-parametrics for the behavioral sciences.* New York: McGraw-Hill Book Co., Inc., 1965.

Smead, V. S. Ability training and task analysis in diagnostic/prescriptive teaching. *Journal of Special Education,* Vol. 11, 113-125.

Smith, R. H. *Learning styles: Measurement and educational significance.* Unpublished doctoral dissertation, Storrs: University of Connecticut, 1976.

Smith, B. B., & Pucel, D. J. Goal structure and change definition in the process of curriculum development. *The High School Journal,* April 1970, *53,* 401-410.

Soloway, M. Exceptional children/regular classroom. *Instructor,* November 1972, *82,* 97.

Taba, H., Levine, S., & Elzey, F. F. *Thinking in elementary school children.* San Francisco: San Francisco State College, 1964.

Tomlinson, P. D., & Hunt, D. E. Differential effects of rule-example order as a function of learner conceptual level. *Canadian Journal of Behavioral Science,* 1971, *2,* 237-245.

Tucker, D. J. *Skill acquisition program bibliography.* Parsons, Kansas: Camelot Behavioral Systems, 1974.

Tucker, D. J. Operationalizing the diagnostic-intervention process. In T. Oakland (Ed.), *With bias toward none: Non-biased assessment of minority children.* Lexington, Ky.: Coordinating Office for Regional Resource Centers, 1976.

Tuckerman, B. W. *A study of the effectiveness of directive versus non-directive vocational teachers as a function of student characteristics and course format.* Final Report, U.S. Office of Education, Washington, D.C., 1968.

Van Osdol, W. R. & Shane, D. G. (Eds.). *Introduction to exceptional children.* Dubuque, Iowa: Wm. C. Brown Company Publishers, 1972.

Washburne, C., Vogel, M., & Gray, W. S. *Results of practical experiments in fitting schools to individuals: A survey of the Winnetka Public Schools.* Bloomington, Illinois: Public School Publishing Company, 1926.

Weber, O. F. Educational reform vs. reformatory education. *Journal of Delinquency,* 1926, *10,* 434-440.

Webster, R. E., & Schenck, S. J. *An individualized method for assessing the learning disabled child.* Paper presented at the Eighth Annual Conference of the Northeastern Educational Research Association, New York, October 1977.

Webster, R. E., & Schenck, S. J. *Discriminative utility of the WISC-R and WRAT in differentiating among LD, ED, and EMH children.* Paper presented at the Tenth Annual Convention of the National Association of School Psychologists, New York City, March 21-25, 1978.

Webster, R. E., & Schenck, S. J. Diagnostic test pattern differences among LD, ED, EMH, and Multi--handicapped students. *Journal of Educational Research* (in press).

Weisgerber, R. A. Planning for the individualization of learning with blind students. *Education of Visually Handicapped,* December 1975, 7(4).

Yoshida, R. K., Fenton, K. S., Maxwell, J. P., & Kaufman, M. J. *Group decision making in the planning team process: Myth or reality?* Report for the Connecticut State Department of Education, 1977.

Yoshida, R. K., Fenton, K. S., Maxwell, J. P., & Kaufman, M. J. *Parental involvement in the special education pupil planning process: The school's perspectives* Report for the Connecticut State Department of Education, 1977.

Ysseldyke, J. Diagnostic-prescriptive teaching: The search for aptitude-treatment interactions. In L. Mann & D. A. Sabatino (Eds.), *The first review of special education.* Philadelphia: JSE Press, Grune and Stratton, 1973.

Ysseldyke, J. Process remediation with secondary learning disabled children. In L. Goodman & L. Mann (Eds.), *Learning Disabilities in the secondary school: Title III curricula developments for secondary learning disabilities.* King of Prussia, Pa.: Montgomery County Intermediate Unit and the Pennsylvania Department of Education, 1975.

Ysseldyke, J. *Current issues in the assessment of learning disabled children and some proposed approaches to appropriate use of assessment information.* Paper presented at the Conference on Assessment in Learning Disabilities, The Howard School, Inc., Atlanta, Georgia, May 1977.

Ysseldyke, J., & Salvia, J. Diagnostic-prescriptive teaching; Two models. *Exceptional Children,* November 1974, 181-184.

Ysseldyke, J., & Salvia, J. *Assessment in special education and remedial education.* Boston: Houghton Mifflin, 1978.

Zaluzhni, A. The principal principles of children's collective pedology. *Pedol.,* 1928, *3,* 78-85.

Zedler, E. Y. Public opinion and public education for the exceptional child: Court decisions 1873-1950. In S. Kirk & F. Lord (Eds.), *Exceptional children: Educational resources and perspectives.* Boston: Houghton Mifflin, 1974.

Zettel, J., & Ballard, J. P.L. 94-142 and Section 504: What they say about rights and protections. *Exceptional Children,* November 1977, *44*(3).

APPENDIX A

STATE OF CONNECTICUT
STATE DEPARTMENT OF EDUCATION
Box 2219 — Hartford, Connecticut 06115

Tel. 566-

Mar. 3, 1978

Dear

The Bureau of Pupil Personnel and Special Educational Services, with the technical assistance of the University of Connecticut, is attempting to determine the characteristics of handicapped students' individual educational programs (IEPs).

The purpose of this undertaking is to identify representative IEPs to determine the strength of the relationship between the educational assessment and the students' IEPs. Based on this information, a series of inservice training programs will be developed in order to further assist LEAs in the development and implementation of students' IEPs.

Within the near future Dr. John F. Cawley, from the Educational Psychology Department of the University of Connecticut, and his staff will be contacting you to request your assistance in gathering information on handicapped students' IEPs.

I am requesting that you randomly select ten (10) IEPs from your files and remove all child identification data in order to maintain confidentiality so that Dr. Cawley and his staff can review the IEPs.

If you are willing to assist the Bureau in this endeavor, you and your staff will be provided the opportunity to attend the first in a series of inservice training sessions based on IEP development and implementation during the spring of 1978.

Thank you for your cooperation.

Sincerely,

Robert I. Hargolin, Chief
Bureau of Pupil Personnel/
Special Educational Services

rim/ms

APPENDIX B

ID #_____ AGE_____ GRADE_____ DISABILITY_____

Objectives	Grade Equivalent	Test
MATH		
READING		
SPELLING		

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APPENDIX C

CODING SHEET

Definitions:

The following definitions have been assigned to the five categories:

1. Affective - Any recommendation, goal, or objective that deals with behavioral or social aspects.

2. Cognitive - Any recommendation, goal, or objective that deals with cognitive aspects.

3. Achievement - Any recommendation, goal, or objective that deals with a specific content area (reading, math, spelling, social studies, etc.).

4. Learning Patterns - Any recommendation, goal, or objective that reflects the learning style or specific teaching strategies to be employed.

5. Other - Any recommendation, goal, or objective in the areas of speech, motor development, vocational education, etc.

Directions:

Take each IEP and the corresponding Psychoeducational Assessment and do the following:

1. Review the recommendations of the psychoeducational assessment. If one or more of the recommendations fall within a category, assign a 1 to that category. If none of the recommendations fall within a category, assign a 0 to that category.

2. Repeat the above procedure with the goals of the IEP.

3. Repeat procedure Number 1 with the short-term instructional objectives of the IEP.

INDIVIDUAL EDUCATIONAL PROGRAMS

Psychoeducational Assessment:

Affective	Cognitive	Achievement	Learning Patterns	Other

Long-Term Goals:

Affective	Cognitive	Achievement	Learning Patterns	Other

Short-Term Goals:

Affective	Cognitive	Achievement	Learning Patterns	Other

Let 1 = Yes

Let 0 = No

ID Number_____

APPENDIX D

PSYCHOEDUCATIONAL ASSESSMENT AND IEP
Survey Sheet

Town_____

ID #_____

D.O.B._____ Grade_____

Sex_____

Diagnosis: LD____ ED____ EMR____ OTHER____

Date of Initial Special Education Placement_____

Length of Time in Present Placement_____

Type of Placement: Self Contained____ Resource Room____ Other____

Psychoeducational Assessment

Date of Most Recent Psychoeducational Assessment_____

TEST(S) UTILIZED

Intelligence Tests: WISC____ WISC-R____ PPVT____ BINET____ OTHER____

Perceptual Motor Test(s): Purdue____ Bender-Gestalt____ Frostig____
Beery____ Benton____ Harris____ Other____

Projective Tests: H-T-P____ D-A-M____ TAT____ CAT____ Rorschach____
Sentence Completion____ Other____

Language Tests: ITPA____ Parsons____ Psycholinguistic____ Other____

Educational Achievement: WRAT____ Iowa____ Stanford____ SRA____
Peabody____ Other____

Diagnostic: Reading_____ Math_____ Other_____

Other Techniques:_____

_____

_____

If Psychoeducational Assessment was not available, were the results of the psychological tests referred to in the IEP? YES____ NO____

PSYCHOEDUCATIONAL ASSESSMENT: (1 = yes; 0 = no)

affective	cognitive	achievement	learning pattern	other

Individualized Educational Program

1. Date of IEP Formulation_____

2. Positions of members involved in IEP Formulation:

   Principal____ Referring Teacher____ Receiving Teacher____ Parent____

   Psychologist____ Subject Area Teachers____ Other_____

	Yes	No	Unsure
3. Does program include:			
Short term objectives	___	___	___
Are they prioritized?	___	___	___
Specifically, are they available for:			
Activities of daily living	___	___	___
Socialization	___	___	___
Motor	___	___	___
Speech	___	___	___
Language Arts	___	___	___
Reading	___	___	___
Spelling	___	___	___
Quantitative Reasoning	___	___	___
Vocational	___	___	___
4. Does IEP include a listing of current performance characteristics?	___	___	___
5. Do goals and objectives include learning patterns?	___	___	___

INDIVIDUALIZED EDUCATIONAL PROGRAM: (1 = yes; 0 = no)

	affective	cognitive	achievement	learning patterns	other
Goals:					
Objectives:					

In evaluator(s)' judgment, correspondence of plan to assessment and evaluation findings:

Extremely High____ (1) High____ (2) Moderate____ (3) Low____ (4) Extremely Low____ (5)

Date of Referral_____

Amount of time in regular class_____

Amount of time in special education_____

Amount of time in speech_____

Date of Review_____

AREAS OF GOALS AND OBJECTIVES

Long Term Goals:

____Achievement (Reading____ Math____ Spelling____
Language Arts____) ____Motor ____Cognitive ____Affective
____Speech

Short Term Objectives:

____Achievement (Reading____ Math____ Spelling____
Language Arts____) ____Motor ____Cognitive ____Affective
____Speech

Psychological Assessment:

____Achievement (Reading____ Math____ Spelling____
Language Arts____) ____Motor ____Cognitive ____Affective
____Speech

_____ Date of psychological assessment

_____ Parental Approval of IEP

_____ Evidence of Evaluation Procedures

_____ Parental Approval for Special Education Placement

APPENDIX E

TABLE A

Math Objectives Across Handicapping Conditions

By Test Grade Equivalents

Objectives	.1-.9			1.0-1.9			2.0-3.9			4.0-5.9			6.0-7.9			8.0-12.0		
	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR
Numeration:																		
rote count 1-5	2																	
rote count 1-10	1																	
rote count 1-50	2																	
rote count 1-100				1														
rote count 1-300							1											
rote count 1-3																		
recognizes nos. 0-25			1															
recognizes nos. 0-50	1																	
writes nos. 1-10	1																	
writes nos. 1-30	1																	
writes nos. 1-100	1																	
writes nos. 1-500							1											
writes nos. 1-25																		
sequence nos.							1											
order nos. 1-990							1											
one-to-one matching							1											
whole numbers											1							
carry > 1								1										
concept of numeration	1																	
greater than/ less than				1			1											

TABLE A

Math Objectives Across Handicapping Conditions

By Test Grade Equivalents

Objectives	.1-.9			1.0-1.9			2.0-3.9			4.0-5.9			6.0-7.9			8.0-12.0		
	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR
Numeration cont.																		
>< 200							1											
odd/even numbers							1											
count by 2's							1											
count to 500 by 2's 3's,20's,25's,50's							1											
count to 100 by 2's,5's,10's				1														
Place Value:	1						1											
one's							1											
ten's							1											
millions							2											
Time Skills:	1						8	1	2	1								
tell time to 1/2 hour			1															
tell time to 1/4 hour				1														
read and write to 1 minute intervals							2											
Money Skills:		1					3	1	2	2								
values of 1¢,5¢, 10¢,25¢,50¢			1															
count coins to $1.50									1									
make change under $1.00									1									
use dollar and cent symbols							1											
read,count & write values under $10							1											
add money amounts with decimals							1											

TABLE A

Math Objectives Across Handicapping Conditions

By Test Grade Equivalents

Objectives	.1-.9			1.0-1.9			2.0-3.9			4.0-5.9			6.0-7.9			8.0-12.0		
	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR
Money Skills cont.																		
subtract money amts. with decimals							2											
Geometry:																		
geometric shapes							1											
simple geometry											1							
Measurement:																		
liquid meas.(pts., cups,qts,gal,1/2 gal							1											
read meas. up to 1/4							1											
16 oz = 1 lb.							1											
2000 lb. = 1 ton							1											
ruler to 1/4 inch							1											
measurement skills	1						4	1	2	1	1							
Addition:	2			1			7		2									
sums to 4	1																	
sums to 5			1															
sums to 12							1											
sums to 18							1											
sums to 20	1			1			1											
facts by rote								1										
multiple digits							1											
word problems							3											

TABLE A

Math Objectives Across Handicapping Conditions

By Test Grade Equivalent

Objectives	.1-.9			1.0-1.9			2.0-3.9			4.0-5.9			[illegible]-7.9			8.0-12.0		
	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR
Addition cont.																		
regrouping							3											
carrying 2, 3 digit numbers				1			4		2									
add within 6th gr. curriculum							1											
percents									1									
Subtraction:	2			1			7		3									
remainders to 4	1																	
remainders to 5			1															
remainders to 12							1											
remainders to 18							1											
remainders to 20				1			1											
facts by rote								1										
multiple digits							1											
word problems							3											
regrouping				1			3											
borrows 2, 3 digit numbers				1														
subtracts within 6th gr. curriculum							1											
percents									1									
Multiplication:				1			1		2				2					
master time tables													1					
tables 0 - 5								1										

TABLE A

Math Objectives Across Handicapping Conditions

By Test Grade Equivalents

Objectives	.1-.9			1.0-1.9			2.0-3.9			4.0-5.9			6.0-7.9			8.0-12.0		
	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR
Multiplication cont.																		
tables 1 - 5							1											
tables 1 - 10							2											
tables 3 - 9									1									
tables 8 - 9									1									
tables 0 - 9									2									
multiple digits (2 digits x 2 digits)							1											
word reasoning problems										2								
multiply in 6th gr. curriculum							1											
regrouping							1											
percents									1									
Division:									1				2					
long division							2											
word reasoning problem							1			2								
division in 6th gr. curriculum							1											
percents							1											
Fractions:	1						4	1	2		1							
add									1				1					
subtract									1				1					
multiply									1				1					
divide									1				1					

TABLE A

Math Objectives Across Handicapping Conditions

By Test Grade Equivalents

Objectives	.1-.9			1.0-1.9			2.0-3.9			4.0-5.9			6.0-7.9			8.0-12.0		
	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR
Fractions cont.																		
complete fractions																		
label fractions				1														
use 1/2, 1/3, 1/4																		
Decimals:																		
add							1		1									
subtract							1		1									
multiply							1		1									
divide									1									
Calendar Skills:									1									
names days								1	1									
names months								1	1									
Miscellaneous:																		
basic fact review										1								
improve computational skills							1											
flash cards							1											

TABLE B

Reading Objectives Across Handicapping Conditions

By Test Grade Equivalents

Objectives	.1-.9			1.0-1.9			2.0-3.9			4.0-5.9			6.0-7.9			8.0-12.0		
	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR
Alphabet Skills:	1		1															
names letters				2		1	1											
b,d discrimination				2				1										
p,q discrimination				2														
matches letters								1										
write letters&nos. from dictation	1																	
Language Arts:																		
sight vocabulary						2												
color words				1		1												
days						1												
months						1												
number words (1-10)																		
definitions				1														
word classification				1														
word identification						1												
word comprehension						1												
word endings				1										1				
compound words					1		1											
contractions				1	1		1	1										
prefixes								1										
suffixes				1	1		1											

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TABLE B

Reading Objectives Across Handicapping Conditions

By Test Grade Equivalents

Objectives	.-.9			1.0-1.9			2.0-3.9			4.0-5.9			6.0-7.9			8.0-12.0		
	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR
Language Arts cont.																		
rhymes				1														
root words				1														
verbs				1														
plurals				1														
dictionary skills							1											
antonyms				1														
homonyms				1														
synonyms				1														
Phonics:																		
a. Vowels vowel sounds	2			3	1			1	1	2			1					
short vowels				5	1	2	7	1										
long vowels				3			4											
vowel patterns	3			6	1		5	1		2								
vowel teams				1														
u/r vowel syll.				2														
vowel rules							1											
silent e words				3			1			1								
b. Consonants consonant sounds	2			6		1	3		1	3								
initial consonants				1						1								
final consonants				1				1										

TABLE B

Reading Objectives Across Handicapping Conditions

By Test Grade Equivalent

Objectives	.1-.9			1.0-1.9			2.0-3.9			4.0-5.9			6.0-7.9			8.0-12.0		
	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR
Phonics cont.																		
b. Consonants consonant sounds																		
silent consonants																		
c. Phonetics																		
hard, soft c, g, tch, dge, ck				2		1	3		1	1								
team auditory sounds				1														
word attack skills				1			2	1										
blends	1			4		1	4		1	3								
initial blends										1								
final blends										1								
irregular words																		
digraphs				2	1	1	3											
diphthongs				1														
sound/symbol relationship				1			1			1								
encoding				1									1					
decoding				3		1	5						4					
phonetic skill				1			1											
Syllabication:																		
divide words into syllables				1														
open syllables				1						2								
closed syllables						2				2								

TABLE B

Reading Objectives Across Handicapping Conditions

By Test Grade Equivalents

Objectives	.1-.9			1.0-1.9			2.0-3.9			4.0-5.9			6.0-7.9			8.0-12.0		
	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR
Syllabication cont.																		
silent syllables				1														
multi-syllables				1			2		1				2	1				
Reading:																		
increase 3 mos.									1									
w/context clues				1														
isolated words													1					
word/sentence meaning				2					1									
comprehension	1			7			3			1			1					
Reading Skills:																		
sequencing				4														
recall details				4			3	1										
main idea				3			3		2	2								
draw conclusions				2														
follows direction				1														
subordinate details							1											
draw inferences							1											
answer questions							1											
recognize/locate facts and details							2	1										
independent reading				1														
silent reading				3														

TABLE B

Reading Objectives Across Handicapping Conditions

By Test Grade Equivalents

Objectives	.1-.9			1.0-1.9			2.0-3.9			4.0-5.9			6.0-7.9			8.0-12.0		
	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR
Reading Skills cont.																		
oral reading				1	1													
understand poetry				1														
story problems and solutions				1			1											
summarization				1			1											
anticipate outcomes				1														
know cause and effect				1														
interpret characters and behavior				1														
understand expository articles				1														
know fact from fantasy				1														
understanding nonsense stories				1														
make comparisons				1														
reading skill						1	4		1	6						1		

TABLE C

Spelling Objectives Across Handicapping Conditions

By Test Grade Equivalents

Objectives	.1-.9			1.0-1.9			2.0-3.9			4.0-5.9			6.0-7.9			8.0-12.0		
	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR
Phonetic Skills:																		
a. Vowels vowel rules							1		1									
vowel patterns (ccvc, cvcc, etc.)	1			3	1		4											
vowel teams				1				1										
vowel r/u words	1			2														
long vowels				1			5											
short vowels				1			5											
silent e words	1			3				1		1								
b. Consonants consonant sounds	1						2											
initial consonants				1														
final consonants				1														
consonant combinations				1														
c. Phonetics syllabication																		
rules									1	1								
closed syllables	1			1						1								
open syllables				2														
single syllables				2														
multi-syllables							5			1								
silent syllables				1														
blends				1	1		3											
hard/soft s,c,g, tch,dge				1			3	1		2								

TABLE C

Spelling Objectives Across Handicapping Conditions

By Test Grade Equivalents

Objectives	.1-.9			1.0-1.9			2.0-3.9			4.0-5.9			6.0-7.9			8.0-12.0		
	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR
Phonetic Skills cont.																		
c. Phonetics syllabication																		
final sounds ch, ng, sh, th				1														
irregular words	1			1			2			1								
word attack skills				1														
word patterns				1														
increase phonetic skills							1											
sound/symbol relationship				1			1											
digraphs							2											
diphthong										1								
Language Arts:																		
punctuation							2			1								
word endings				1			3	1										
capitalization							2											
contractions							1											
noun phrases							1											
verb phrases							1											
write sentences																		
days									1									
months									1									
suffixes								1	1									

TABLE C

Spelling Objectives Across Handicapping Conditions

By Test Grade Equivalents

Objectives	.1-.9			1.0-1.9			2.0-3.9			4.0-5.9			6.0-7.9			8.0-12.0		
	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR	LD	ED	EMR
Language Arts cont.																		
prefixes									1									
Miscellaneous:																		
cursive letters					1													
spell and define x words per week							1	1	1									
prints ltrs. of appropriate size & shape									1									
word lists				1	1		2											
upper & lower case letters							2											
copy letters							2											
increase spelling skills																		
own name				1														
letters				3														
words out of context										1								
letter formation	1						1											
comprehension				1														
isolated words, letters, sentences							1											
use spelling words in sentences							1											

APPENDIX F

TABLE A

Test Totals - Educational Tests

N=300 IEP's

This list illustrates the tests utilized in the educational evaluations for the 300 IEPs and corresponding psychoeducational assessments received by the evaluators. It is interesting to note that the most widely utilized instrument is the Wide Range Achievement Test. It must be noted that not all the IEPs received were accompanied by the psychoeducational assessment; therefore, any statements generated through this listing should be made with caution.

WRAT	89
PIAT	44
KEY MATH	29
WOODCOCK	17
SPACHE	8
STANFORD	7
DURRELL	4
BOTEL	1
GREY	6
GATES	3
SLOSSON	1
SRA	1
DOLCH	1
IOWA	1
METROPOLITAN	1
IRI	1
MORRISON-McCALL	1
AYRES	1
GILMORE	1

TABLE B

Educational Tests Utilized by Area of Assessment

This list illustrates the grouping and frequency of the educational evaluations for the 300 IEPs and corresponding psychoeducational assessments received by the evaluators. In all cases the Wide Range Achievement was the instrument with the highest frequency of utilization across the diagnostic categories of Reading, Spelling and Math. It must be noted that not all of the IEPs received were accompanied by the psychoeducational assessment. A fair number of IEPs were accompanied by synopsis reports only; therefore, any statements generated through this table should be made with this variable under consideration.

Although it might appear that some conflict exists with respect to the totals (Example: WRAT Reading - 78) in this table and Table A (WRAT - 89), this is not the case. Not all the WRAT evaluations included all three areas of assessments, consequently there is some overlap which accounts for the discrepancy.

Reading - 11		Spelling - 5		Math - 5	
WRAT	78	WRAT	78	WRAT	79
PIAT	38	PIAT	31	PIAT	40
Woodcock	17	Durrell	3	Key Math	29
Spache	8	Ayres	1	Stanford	1
Stanford	7	Morrison-McCall	1	Iowa	1
Grey	7				
Gates	3				
IRI	1				
Botel	1				
Metropolitan	1				
Slosson	1				

TABLE C

Assessed Weaknesses - No Spelling Objectives

This table offers a display which matches disability, age, grade, assessment instrument, and grade equivalent score. In all cases, there were no spelling objectives in evidence within the IEP. A careful inspection will reveal that some cases indicated a discrepancy as much as four to five years below indicated grade placement.

It is possible that spelling attention is given to these individuals; however, it is not so indicated in the IEP received by these researchers.

Disability	Age	Grade	Instrument	Grade Equivalent
ED	8	2	WRAT	3.5
ED	15	9	WRAT	5.2
ED	16	9	PIAT	4.9
ED	16	9	WRAT	4.9
ED	16	10	PIAT	4.9
ED	?	?	PIAT	1.5
?	14	6	PIAT	4.6
CP	18	9	WRAT	4.6
Multiple	9	2	WRAT	1.7
Speech	10	4	WRAT	2.5
EMR	11	Int.	WRAT	2.9
LD	15	8	WRAT	4.6
LD	9	2	WRAT	1.6
LD	7	2	Morrison-McCall	1.3
LD	9	2	WRAT	1.1
LD	9	3	WRAT	1.2
LD	9	3	WRAT	2.6
LD	12	6	Durrell	3.5
LD	10	5	Ayres	1.0
LD	10	4	PIAT	3.7
LD	11	6	PIAT	3.5
LD	10	5	WRAT	2.2
LD	12	7	WRAT	5.0
LD	16	H.S.	PIAT	5.8
LD	16	8	WRAT	5.5
LD	?	6	PIAT	4.1
LD	?	9	WRAT	6.8
LD	?	9	WRAT	4.7

TABLE D

Assessed Weaknesses - No Math Objectives

This table offers a display of disability, age, grade, math assessment instrument, and grade equivalent score. In all cases there were no math objectives in evidence within the IEP. A careful inspection will reveal some cases with a discrepancy factor as great as three to four years below indicated grade placement.

While it is possible that these individuals are, indeed, receiving individual attention to their math needs, this attention was not indicated in the IEP received by these investigators.

Disability	Age	Grade	Instrument	Grade Equivalent
ED	7	1	WRAT	K.7
ED	13	8	WRAT	4.5
ED	16	9	PIAT	5.3
ED	16	10	WRAT	6.3
ED	16	10	PIAT	7.9
?	14	6	PIAT	3.3
CP	18	9	WRAT	4.9
Multiple	9	2	WRAT	2.5
Speech	10	4	WRAT	2.5
Gifted	9	4	WRAT	2.6
LD	15	8	WRAT	5.3
LD	15	8	Key Math	4.5
LD	13	8	Key Math	6.2
LD	14	8	Stanford	6.1
LD	15	8	WRAT	6.7
LD	8	2	WRAT	1.0
LD	8	3	WRAT	2.5
LD	7	1	PIAT	0.6
LD	9	1	PIAT	1.0
LD	9	3	WRAT	2.5
LD	11	3	PIAT	0.6
LD	11	5	WRAT	1.0
LD	12	6	PIAT	2.2
LD	9	4	Key Math	2.7
LD	10	4	WRAT	3.2
LD	12	5	WRAT	3.6
LD	10	5	WRAT	3.6

TABLE D (continued)

Assessed Weaknesses - No Math Objectives

Disability	Age	Grade	Instrument	Grade Equivalent
LD	12	6	WRAT	5.5
LD	9	4	WRAT	3.0
LD	11	6	WRAT	3.0
LD	10	5	WRAT	3.0
LD	12	7	Key Math	6.3
LD	13	6	WRAT	3.6
LD	?	9	WRAT	4.5

TABLE E

Assessed Weaknesses - No Reading Objectives

This table offers a display which matches disability, age, grade placement, assessment instrument and grade equivalent score in reading. In all cases, there were no reading objectives in evidence within the IEP. A careful inspection will reveal that some cases indicated a discrepancy as much as four to five years below grade placement.

It is possible that these individuals are, indeed, receiving individual attention to their reading needs. This attention, however, was not indicated in the IEP received by these investigators.

Disability	Age	Grade	Instrument	Grade Equivalent
ED	15	9	WRAT	8.1
ED	16	9	PIAT	5.0
ED	16	9	WRAT	6.0
?	14	6	PIAT	5.0
?	7	2	Woodcock	1.8
?	9	7	Spache	4.5
CP	18	9	WRAT	4.4
Multiple	9	2	WRAT	1.2
Speech	10	4	WRAT	1.9
EMR	13	?	WRAT	4.2
LD	13	?	PIAT	3.9
LD	15	8	Woodcock	4.3
LD	10	5	PIAT	4.1
LD	11	6	PIAT	3.0
LD	16	H.S.	PIAT	7.2
LD	16	9	Slosson	3.5
LD	?	6	Spache	5.5
LD	?	9	WRAT	6.6
LD	?	9	WRAT	5.0